

DAILY METAL REPORTER

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In This Issue

WORLD LEAD, ZINC PRODUCTION IN '57 TO AGAIN EXCEED USE

By RICHARD H. MOTE, Chief

Branch of Base Metals, U. S. Bureau of Mines

STORAGE BATTERY LEAD USE TO INCREASE THIS YEAR

By B. B. STEINER, President

Association of American Battery Manufacturers, Inc.

BRITISH METAL MARKETS

By L. H. TARRING

London, England

**DOMESTIC METAL MARKET REVIEW
U. S. METAL IMPORT DUTIES
WASHINGTON REPORT
METAL STATISTICS**

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TWO
LINE
Editorials

If, as has been suggested, a Constitutional limit is placed on the income tax rate, some optimistic taxpayers are hoping that it may be held under 100 per cent.

If President Eisenhower sticks to his declaration that in future he will observe the speed laws, he's going to find that practically everybody else will pass him on the road.

An editor declares that "the popularity of the United States in foreign countries is at a low ebb." The popularity of our dollars, however, seems undiminished.

A total of seventeen billion aspirin tablets were made in the United States last year. But surely we must have had more headaches than that.

Economists say that an old-time dollar went further than it does today. On the other hand, did you ever hear of an old-time dollar that went as far as some of today's foreign aid dollars?

A science report reveals that there are 800 different colors. But why is it that some men don't seem to be satisfied unless they can get all 800 of them in the same necktie?

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THE
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Washington Report



May 9, 1957

THE EXTENT to which domestic metal industries depend on Government props was demonstrated during the month in review when "temporary" suspension of the barter program (swapping of U. S. Government-owned surplus farm products for lead and zinc of foreign origin), brought in its wake declines in the prices of zinc and lead. Contributing to the weakness in the market was the uncertainty as to the duration of the long-term stockpiling program for both metals.

Although the spotlight was on stockpiling, still waiting in the wings was the Administration's long-awaited, long-range domestic minerals policy. The Western Governors Conference adopted a resolution endorsing continuation of the barter program "until such time, not too long delayed, as an equitable and effective long-range minerals policy, based on reasonable and effective import control measures, can be formulated and put into effect."

CCC Suspension

Even though the Commodity Credit Corp. recently had obtained a quota from the Office of Defense Mobilization to acquire 100,000 tons of foreign-origin zinc for the supplemental stockpile through the barter program, the agency late in April refused to accept any more offers. No reason was given for the CCC's withdrawal from the market. The CCC merely contented itself with unofficial statements that the barter program suspension was only "temporary." It was patent that the domestic prices for both zinc and lead could not be maintained only by purchases of moderate tonnages of domestic zinc by the General Services Administration for the long-term stockpile, and with the London price for the metal on May 7 1.50c below the U. S. price, domestic suppliers on the same day also cut their price 1.50c to a basis of 12.00c a pound East St. Louis for the Prime Western grade. The domestic lead price was cut 0.50c on May 9 to 15.50c a pound New York.

Since the CCC expects a Congressional investigation of its barter activities, the entire program, Washington quarters asserted, is being carefully scrutinized by the agency's top brass. Some observers here were inclined to believe that because of criticism by foreign countries of the CCC program, only certain farm products may figure in future barter deals if and when the suspension is ended.

Long-Term Stockpiling

Defense Mobilizer Gordon Gray on April 30 announced that the Government expects to continue purchases of lead and zinc for the nation's strategic stockpile for a while to come. He said he saw no reason to deviate from the present policy of the GSA making

month-to-month purchases of the metals for the long-term stockpile. Mr. Gray's statement was made following remarks by Felix Wormser, Assistant Secretary of the Interior, at a meeting in Chicago. Mr. Wormser said domestic lead and zinc stockpiling would end "in a matter of months." This was interpreted as meaning within a few months, possibly at the end of the 1957 fiscal year, June 30, 1957.

While Mr. Gray declined to elaborate on future plans, he noted that the Government issued its customary monthly call for both lead and zinc in April. Normally the ODM keeps future stockpiling plans secret. But some quarters believed Mr. Gray's statement meant purchases of lead and zinc for the long-term stockpile might continue through most of 1957.

Administration's Program

Mr. Wormser also disclosed, this time at a meeting on May 8 in Louisville, Ky., that the Administration's long-range minerals program will be sent to Congress "in the near future." But he gave no hint what aid the program will spell out for domestic lead and zinc producers. Discussing the outlook for various metals, he said:

Consumption of copper, lead and zinc will continue to grow with real income, that "domestic production of these metals has had little growth over the last several decades and may have difficulty in holding its own in the future, due to depletion of higher grade domestic ores." Concerning aluminum, he said its use by 1975 "will probably be between two and three times the present level."

Gov't Doesn't Need Nickel

Defense Mobilizer Gray, on the same day he issued a statement about stockpiling of domestic lead and zinc, said the Government will not need any nickel for the stockpile through the end of this year. Previously the ODM

had indicated it would make no calls on nickel output through June. This means, Mr. Gray said, that the Government will have been out of the market for nickel during the whole of 1957.

But demand for nickel will probably exceed the total amount available to U. S. consumers until 1959 or 1960, the newly-formed Nickel Plating Industry Advisory Committee was told by officials of the Business and Defense Services Administration at its first meeting here early in May.

World Lead, Zinc Output

Another Government official, Richard H. Mote, chief, Branch of Base Metals, U. S. Bureau of Mines, at a meeting in Chicago estimated that world production of slab zinc in 1957 should reach an all-time high of 3,141,000 short tons, an increase of 59,000 tons over the 1956 output. World lead production is estimated at 2,328,000 short tons, an increase of 27,000 tons over 1956. Mr. Mote remarked there is strong evidence that the world output of both lead and zinc will continue to exceed consumption during 1957, and that the Government's stockpiling program as well as the barter transactions of the Commodity Credit Corp. will continue to be important elements in the market balance. (Details of Mr. Mote's address at Chicago are published in this issue on Page 7.)

Expansion Goals

The ODM announced on April 25 the closing of three expansion goals, including one for mercury. The goals were closed following studies which indicated that sufficient capacity either is planned or now exists to meet presently known mobilization requirements for mercury.

Aluminum Set-Asides Raised

The Business and Defense Services Administration on May 1 announced that 145,000,000 pounds of aluminum will be set aside from the total supply available in the third quarter of 1957 to fill Department of Defense and Atomic Energy Commission orders. This reserve is 5,000,000 pounds more than the amount set aside for similar orders in the 1957 second quarter.

Magnesium Plant Bid

Dow Chemical Co. submitted a top bid of \$19,370,000 for the Government-built magnesium plant at Velasco, Tex., the GSA announced. Dow now operates the plant under a lease that expires in January, 1958.

Fast Tax Writeoffs

The Carborundum Metals Co. division of the Carborundum Co., Parkersburg, W. Va., has been given a certificate of necessity for \$7,188,851, of which 75 per cent is allowed for accelerated tax amortization, for expansion of facilities for production of zirconium and hafnium metal. ODM announced in mid-April. The certificate had previously been denied.

U. S. Treasury Secretary Humphrey meanwhile has called on Congress to limit use of fast tax amortization to strictly defense items. Appearing before the Senate Finance Committee, Mr. Humphrey endorsed a bill introduced by Chairman Byrd that would cut down the types of businesses that could write off the cost of new facilities for tax purposes over a five-year period instead of the usual 20 to 25-year span.

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WORLD PRODUCTION OF LEAD AND ZINC THIS YEAR TO SHOW INCREASES AND AGAIN TOP CONSUMPTION

U. S. Gov't Stockpiling Program and Dep't of Agriculture Barter Deals Will Continue to Be Important Elements in Market Balance

By RICHARD H. MOTE, Chief, Branch of Base Metals, U. S. Bureau of Mines

THIS PAPER attempts to estimate the total world output of slab zinc and pig lead, by individual countries, in 1957, in so far as known current rates of output and other information from various segments of the industry and Government permit. Because some zinc and lead have been exported recently from the Soviet sphere to Western European markets, Russia and its satellite countries are included in the compilations. Far less is known, however, of zinc and lead activities in these countries than elsewhere in the world. The Iron Curtain is not only an effective barrier against dissemination of information on political and military matters, but it is almost entirely effective as regards to data on production, consumption, and stocks of zinc and lead.

The estimated world production of slab zinc in 1957 should reach a new record high of about 3,141,000 short tons, an increase of 59,000 tons, or 2 per cent, over the 1956 output. Smelter production of lead in 1957 is estimated at about 2,328,000 short tons, an increase of 27,000 tons, or slightly more than 1 per cent.

Geographic Distribution

The geographic distribution of world zinc and lead production has changed somewhat during the past 10 years. Immediately after World War II, the principal foreign slab-zinc-producing countries, listed in order of decreasing production, included Canada, U. S. S. R., Belgium, Australia, United Kingdom, Poland, Mexico, and France, whose total in 1946 comprised 84 per cent of the slab zinc produced outside the United States. The U. S. S. R. is now second to the United States as the largest producing country, followed by Canada, Belgium, Germany (West), Poland, Japan, France, and Australia. A decade ago the principal foreign lead-producing countries were Canada, Australia, Mexico, U. S. S. R., Peru, Yugoslavia, Spain, and France. The total output of these eight countries comprised 81 per cent of the lead produced outside the United States. Currently Australia

is the second largest lead-producing country, followed by U. S. S. R., Mexico, Canada, Germany (West), Belgium, Yugoslavia, and France. In 1956 these countries supplied 72 per cent of the lead produced outside the United States. Let us consider now the estimated output of these and other less important zinc and lead-producing countries.

Russia

As I said a moment ago, very little reliable information is available on zinc and lead activity in the Soviet Sphere. Most data are fragmentary and of little use in estimating metal production in this very important part of the world. We do know, however, that some zinc and lead have moved from Poland and Russia to Western European markets in the last year or two, and the quantities seem to be increasing. Polish zinc smelters are currently producing about 14,000 short tons of zinc metal per month. Although this rate may fluctuate somewhat from month to month, the magnitude of change probably will not be significant, so that we may therefore expect a slab-zinc output of about 170,000 tons this year. Increased smelter output will depend largely upon an increased flow of imported zinc concentrates, which in recent years has included production from Sweden, Italy, Yugoslavia, and Bulgaria. Most of the refined zinc obtained from these concentrates is consumed within the Soviet Sphere.

Russian zinc-metal production in 1957 is estimated at about 330,000 short tons. Presumably a substantial portion of the zinc-concentrate output will come from resources within the Soviet Union, probably largely from Central Asian States. Considerable quantities will continue to come from Poland, however, as well as East Germany. Installed smelting capacity is believed to be adequate to handle increased mine outputs of zinc and lead resulting from new discoveries in Bulgaria and Central Asia. Development of several million tons of lead-zinc ore averaging 15 per cent combined metal content in Bulgaria will add to the increased Soviet metal output as well as assist in maintaining or perhaps expanding the Polish metal output. Smelting capacity in Bulgaria is quite limited, and most of the concentrates produced are shipped to Soviet smelters or to Polish smelters for Soviet account. It is anticipated that zinc and lead supplies in the Soviet Sphere

will be ample to meet internal requirements as well as yield a limited supply for export should conditions appear favorable to the Soviets. Self-sufficiency without regard to production costs can be presumed to be a paramount objective of the U. S. S. R.

Now that we have dealt first with the phase of the subject about which least is known let us move on to the important zinc and lead-producing countries in the rest of the world.

Australia

Australia has been one of the world's leading sources of lead and zinc for many years. Slab-zinc production in Australia is limited to the output of the electrolytic zinc plant at Risdon, Tasmania, which has an annual productive capacity of about 119,000 short tons. In 1956 this plant produced 117,000 short tons of slab zinc. It is estimated that production in 1957 will remain relatively unchanged. Australian consumption of slab zinc does not normally require more than 65 per cent of annual smelter output. Thus, approximately 41,000 tons will be exported, along with the zinc concentrates produced in excess of domestic smelting requirements. Australian lead production in 1957 is estimated at about 260,000 tons—approximately the same as in 1956. Increased output of lead and zinc in future is forecast, however, as a result of a 5-year expansion program begun recently at the Mt. Isa mine, Queensland. A new 30,000-kw power plant, a new shaft and underground crushing facilities, a new lead-zinc flotation mill and improvements to the existing lead and copper smelters are expected to triple the ore-output rate by late 1961.

Canada

The two Canadian zinc smelters at Trail, British Columbia, and Flin Flon, Manitoba, produced 256,000 short tons of slab zinc in 1956, slightly less than the alltime high output of 257,000 tons recovered in 1955. The annual capacity for slab-zinc production at these two plants is approximately 261,000 short tons and with continued high-level output of zinc concentrates resulting from recent zinc-lead discoveries and developments, it is felt that slab-zinc output will be maintained at virtually the same level as in 1956. In recent months Canadian lead-metal output has been averaging 13,000 short tons. Maintenance of this rate through the remainder of this year will put the

Paper presented at combined meeting of American Zinc Institute and Lead Industries Association, Chicago, Ill., April 25, 1957.

Dominion lead output for 1957 at 156,000 tons — no record production but an impressive gain over 1956.

The significance of new zinc-lead discoveries and developments in Canada is becoming increasingly apparent. In the New Brunswick area the Heath Steele mine and 1,500-ton-per-day mill are in production. The copper circuit was put in operation in January and the lead-zinc circuit a few weeks later. The latter at capacity operation will produce approximately 24,000 tons of recoverable zinc and 12,000 tons of recoverable lead annually. Shipments of concentrates probably will await completion of the 22-mile railway later this year.

New Brunswick Mining & Smelting Co. continues to develop its property and work toward an economic solution of the complex metallurgy involved. It is understood that programming of production will be undertaken shortly.

New Brunswick Reserves

At present the New Brunswick area reserves, totally unknown five years ago, are estimated to contain 7,000,000 tons of zinc and 2,800,000 tons of lead, plus substantial quantities of copper and silver in the 128,000,000 tons of ore indicated, largely within the 1,000 feet nearest the surface.

In Ontario, Geco Mines, Ltd., Inc., has virtually completed its 3,300-ton mill at Manitowadge which will this summer be treating ore containing 3.5 per cent zinc and 1.7 per cent copper. The annual yield of the mill is expected to approximate 25,000 tons of zinc. In the same area, Willroy Mines, Ltd., has completed its

Willroy mine shaft and is going forward with mine development and construction of a 1,000-ton-per-day mill that is scheduled for production by the end of this year. The reserves are large and contain 1.1 per cent copper and about 6 per cent zinc. The annual recoverable output of the mill should approximate 12,500 tons of zinc.

In Northern Manitoba, Hudson Bay Mining & Smelting Co. is sinking a development shaft at its Chisel Lake zinc property in the Snow Lake area, where major discoveries of zinc and copper have been reported.

The development of the Pine Point Mines, Ltd., property in the Northwest Territories has continued, and it now appears that reserves are about 100,000,000 tons containing about 2,000,000 tons of lead and over twice that quantity of zinc. The remoteness of the property prevents immediate production, but unquestionably when transportation facilities become available this area will become productive.

Belgium

Except for periods during World Wars I and II Belgium has always played an important role in the international zinc and lead scene. Although there are some lead-zinc deposits in Belgium, all metal produced at present is derived from imported ores. Based on the current rate of slab-zinc output (which is about 21,300 short tons a month), it seems reasonable to assume that Belgian smelters will produce approximately 256,000 short tons of metal in 1957. The production of electrolytic zinc in the Belgian Congo, which began in June 1953, has reduced the quantity

of Congo concentrates going to Belgium for treatment. But Belgian smelters have made up this deficit by treating greater tonnages of concentrates from Europe and elsewhere in the world. Zinc concentrates currently being smelted include some from Spain, Sweden, Australia, and Greenland. Greenland made its first commercial production of zinc and lead concentrates in 1956. The estimated production of lead in Belgium in 1957 will be about 110,000 tons, virtually the same as in 1956.

Germany

Germany and Belgium together produced over half of the zinc metal smelted in Europe, plus a substantial portion of lead. In Germany about 70 per cent of the concentrates smelted are of domestic origin. Imported concentrates come principally from Peru, Sweden, Italy, Yugoslavia, and Spain. Production continues to be maintained at a high level at zinc-lead mines in West Germany; and it is anticipated that, with continuation of substantial imports of concentrates, German smelters will produce 215,000 short tons of slab zinc and 130,000 tons of lead in 1957.

France

In France, zinc production is averaging close to 10,000 short tons a month, principally from the two smelters at Auby and Viviez, which are treating concentrates from Spain, French North Africa, and properties in other countries in which the French have financial interest. Although slab-zinc consumption in France is about double the smelter production, little change is expected in the rate of smelter output. The balance of slab zinc required to fulfill consumer needs must be met by purchases of zinc metal, chiefly in Canada, Belgium, and the United States. Lead consumption in France also exceeds the lead-metal output of French smelters. The French lead-smelting industry is producing at a rate slightly over 70,000 short tons annually. Here again, no changes are in prospect.

Japan

Smelter output of slab zinc in Japan has been increasing annually for the past several years and is expected to establish a new record output of approximately 155,000 short tons in 1957. Lead production will remain unchanged at approximately 40,000 short tons in 1957. The slab-zinc production approximates Japanese requirements, but there is need for importing pig lead to meet internal requirements.

Peru

The long-range zinc program of the Cerro de Pasco Corp. in Peru has resulted in expanded zinc output and increased production potentials in that country. Recent completion of the Paucartambo River hydroelectric plant will enable the company to expand zinc output at its La Oroya electrolytic smelter from a current daily rate of 120 tons to 150 tons a day by the end of this year and thereafter gradually increase to 240 tons per day or 87,000 tons of slab zinc per year. On the basis of this information, it is estimated that slab-zinc output in Peru in 1957 will be approximately 35,000 short tons.

World Smelter Production of Lead*

In 1946, 1951, 1956 and 1957

Country	(In short tons)		1956	1957
	1946	1951	(estimate)	(estimate)
Argentina	17,846	26,167	20,000	22,000
Australia	153,953	221,346	263,000	260,000
Austria	4,934	12,287	11,000	12,000
Belgium	26,193	80,271	113,000	110,000
Burma		5,474	16,000	16,000
Canada	165,742	162,712	148,000	156,000
China		15	5,500	19,000
France	35,285	53,970	70,000	70,000
French Morocco		24,606	31,000	30,000
Germany:				
East		18,500	33,000	33,000
West	\$30,489	83,845	128,000	130,000
Italy	15,729	40,212	43,000	45,000
Japan	4,444	11,839	40,000	40,000
Mexico	151,833	241,524	214,000	220,000
Northern Rhodesia	9,227	15,646	17,000	18,000
Peru	40,210	48,774	62,000	66,000
Poland	12,032	20,000	24,000	24,000
Rumania	3,555	9,900	12,000	12,000
Spain	35,655	49,285	65,000	65,000
Sweden	12,371	10,259	23,000	23,000
Tunisia	8,265	25,250	27,000	27,000
U. S. S. R.	52,910	141,500	255,000	255,000
United Kingdom	2,800	4,583	7,000	7,000
United States	338,094	414,628	542,000	550,000
Yugoslavia	35,935	66,214	83,000	83,000
Other†	7,583	15,708	35,000	35,000
	1,165,100	1,810,000	2,301,000	2,328,000

* Output from scrap excluded wherever possible. † Excludes bullion exported, probably 3,000 tons. ‡ Brazil, Bulgaria, Czechoslovakia, Greece, Guatemala, Hungary, India, Korea, Netherlands, Portugal. § Includes East and West Germany.

compared with 10,000 tons in 1956. It is understood that much of the smelter output is to be based on utilization of concentrate too low grade to export.

Other foreign countries producing slab zinc and pig lead and their estimated outputs for 1957 may be noted in the accompanying tables.

United States

Based upon the current rate of domestic mine production, it is estimated that the United States slab-zinc output will reach a new record high of 1,000,000 short tons in 1957. Smelter output of lead in the same year is estimated at 550,000 short tons.

In the United States many new mines are being developed; these will contribute to expanded supply of zinc and lead. Among those in the eastern United States are the New Jersey Zinc Co., Friedensville, Pa., property, which is scheduled to begin production late in 1958 with an annual output of approximately 78,000 tons of zinc concentrate; approximately 40,000 tons of this will be recoverable zinc. New Jersey's Ogdensburg, N. J., property has an anticipated annual capacity for 300,000 tons of crude ore, indicating a large increase in output of recoverable zinc. At Timberville, Va., the Tri-State Zinc Co. expects to begin production soon, with an annual output of approximately 7,000 tons of recoverable zinc. In Tennessee the Flat Gap mine of New Jersey Zinc Co., now being developed, is expected to start producing in 1958, with a daily mill output of 2,000 tons. Initial output of the Coy mine of the American Zinc Co. of Tennessee was scheduled for late 1956 but was delayed owing to floods. It is expected to begin production shortly, with an output of approximately 500 tons of ore per day, which will be treated in the company Mascot mill. Two Tennessee mines that began making significant contributions to zinc output in 1956 are the Jefferson City mine of the New Jersey Zinc Co., with its 1,000-ton-per-day mill, and the Young mine of the American Zinc Co., which began producing in 1955 with a 1,000-ton-per-day potential output and reached full capacity in April 1956.

Tennessee's Sources

The significance of Tennessee as a future source of zinc is emphasized by a recent statement of the American Zinc Co. that the Southwest New Market DMEA project in Tennessee has indicated approximately 26,000,000 tons of zinc ore in four major areas and 10,000,000 tons in smaller ore bodies. The reserve, in terms of concentrate, is 2,000,000 tons of 60-per cent zinc concentrate or approximately 1,000,000 tons of recoverable zinc. American Zinc Co. has stated further that its other reserves in eastern Tennessee are of about the same magnitude, making a total of roughly 2,000,000 tons of recoverable zinc.

Exploration is proceeding at an intensive pace in Tennessee and Virginia, and additional zinc and some lead discoveries are being made in excess of the mining rate. Almost every zinc-mining district in the eastern United States is maintaining or increasing its metal output.

Central States

In the central United States discoveries continue to be made, offsetting in large measure the reserves already mined. Actually, in 1956 the zinc mined in the Upper Mississippi Valley area was greater than in any year since 1927. Although production in the Tri-State area has declined greatly and it is generally thought that few recent discoveries have been made, it is worth noting that since 1946, when the Bureau of Mines calculated zinc reserves at 50,000,000 tons of crude ore, the district has mined and milled 55,000,000 tons of crude ore, and most of the original 50,000,000 tons remains.

Lead production in the central United States remains at a relatively constant level, with St. Joseph Lead Co., operator of the principal mines in the Southeast Missouri lead belt, developing new properties at a consistent rate to maintain output at about 120,000 tons of recoverable lead annually.

Western States

In the western United States developments will also lead to new sources of zinc output. In Arizona, Pima Mining Co. is constructing a new plant to produce 30,000 tons of copper and 4,000 tons of zinc annually. But the big development in the West, the one that really suggests a considerable potential, is that of The Anaconda Co. at Butte, Mont. The underground Northwest Project, involving sinking of the Ryan and Missoula shafts and development of numerous copper-zinc veins north of the Anselmo and west of the Lexington and Mountain Con mines, will ultimately add 15,000 tons of ore to the daily total now being processed. The first unit for 75,000 tons is scheduled to be completed in 1961. Sinking of the Ryan shaft started early this year, and raising under the site of the Missoula shaft from the Alice tunnel is well under way. It may be remembered that F. A. Linforth of The Anaconda Co. in addressing the American Zinc Institute's Thirty-Fourth

Annual Meeting, April 1952, said that "zinc production from the richest hill on earth could be practically doubled within the next five years." This suggests that annual output could be increased by 75,000 tons, and it would appear that the development program under way may approximate that goal.

Secondary Sources

Although production of lead from secondary sources has been excluded wherever possible in the table on lead output included in this paper, the significance of this source of raw material must not be overlooked. Here in the United States an estimated 60 per cent of the total refined soft lead consumed annually is recovered sooner or later in the form of secondary metal produced from scrap. Since 1946 scrap metal has been a more prolific source of lead than has the nation's lead mines. Before World War II (average 1937-39) lead mines in the United States produced 63 per cent of domestic supply and scrap accounted for only 37 per cent. Lead recovered from scrap increased steadily from 1938 to 1947, when it represented 57 per cent of total domestic supply, while mine output accounted for only 43 per cent. The latest annual figures for 1956 show that 60 per cent of the domestic supply was secondary lead and 40 per cent came from mine production.

Adequate Supplies

In the light of existing data, it seems reasonable to conclude that supplies of lead and zinc are adequate to meet all foreseeable needs, assuming a free flow in the normal channels of trade, such as now exist. There is strong evidence at this time that the world output of both metals will continue to exceed consumption during 1957 and that the stockpiling program of the United States Government and the barter transactions of the Department of Agriculture will continue to be important elements in the market balance.

World Smelter Production of Slab Zinc

In 1946, 1951, 1956 and 1957

Country	(In short tons)		1956	1957
	1946	1951	(estimate)	(estimate)
Australia	85,473	86,251	117,000	118,000
Argentina	2,000	11,716	14,000	16,000
Belgium	87,427	221,439	250,000	256,000
Belgian Congo			41,000	41,000
Canada	185,680	218,578	256,000	255,000
France	34,187	82,185	124,000	125,000
Germany (West)	16,375	155,029	205,000	215,000
Italy	17,313	52,259	81,000	85,000
Japan	12,404	62,104	155,000	155,000
Mexico	46,277	64,761	62,000	62,000
Netherlands	2,217	24,918	32,000	33,000
Northern Rhodesia	19,253	25,301	32,000	32,000
Norway	33,300	45,002	53,000	56,000
Peru	1,032	959	10,000	35,000
Poland	62,406	125,000	172,000	170,000
Spain	19,365	23,529	25,000	26,000
U. S. S. R.	99,207	182,000	330,000	330,000
United Kingdom	73,379	78,100	91,000	90,000
United States	728,251	881,633	995,000	1,000,000
Yugoslavia	3,495	14,576	15,000	16,000
Other*	5,359	4,660	22,000	25,000
	1,534,400	2,360,000	3,082,000	3,141,000

* Czechoslovakia, Rumania, and China.

STORAGE BATTERY LEAD USE TO HIT 387,000 TONS IN 1957 COMPARED WITH 366,161 TONS LAST YEAR

Average Life of Unit Has Increased from 16.3 Months in 1940 to High Of 28.8 Months in 1956; Vehicle Output May Top 7,000,000 This Year

By B. B. STEINER, President, Association of American Battery Manufacturers, Inc.

A YEAR AGO today I had the pleasure of addressing your group on the subject of "Outlook for Lead in Storage Batteries." Since it never occurred to me that it would fall to my lot to reappear before you on the same subject, I felt safe and made bold with my predictions and perhaps could be accused of not being properly cautious. But to say the least in my defense, if I am to be accused it would be for undue optimism.

Last year I thought some 35,000,000 batteries would be produced in 1956. This figure actually works out to 32,775,291, which resulted in an overestimate of 2,361,709 units and a correspondingly lesser tonnage of lead consumed that year in batteries. (See Table 1 on Page 10.)

I had predicted 416,000 tons of lead

The address by the author, who is president of Cumberland Battery Mfg. Co., was delivered at the 29th annual meeting, Lead Industries Association, Chicago, Ill., April 24, 1957.

to be consumed. The Bureau of Mines' preliminary figure puts this at 366,131 tons. My percentage of error for total number of batteries produced was 6.7 per cent, yet my percentage of error for lead consumed was an overestimate of 12 per cent. Obviously, something beyond actual number of units produced had to account for the wide difference. It would now seem that the extra weight of lead contained in the 12 volt batteries was not enough to counteract the number of cheaper, lighter weight batteries built during the past year and for which the demand seems to be ever-growing. Some of these six volt batteries will contain under eleven pounds of lead. Last year, I did not take these factors into proper consideration. I predicted average lead weight of a battery at 21.6 pounds whereas it seems to have been 20.11 pounds. (See Table 2 on page 10.)

Average Weight to Rise

It would be my belief for future years that the average weight of a battery will increase as the 12 volt

battery assumes a predominating picture in the market. It is of interest to note the progress this type of battery has made since introduced. Reflected in percentage against total registrations, the growth is shown as follows:

	Percentage
1953	.7%
1954	1.2%
1955	5.9%
1956	9.2%

12-Volt Car Registration

As of year end 1956, some 11,080,000 twelve volt equipped cars have been registered. This total is 17.1 per cent of the 1956 total registrations. With the exception of the Willys' Jeep, all passenger cars and some trucks made in the U. S. are equipped with twelve volt batteries. (See Table 3 on Page 11.)

Earlier this year, it was my thinking that perhaps new vehicle production would exceed that of 1956. Production, so far, is running at about the same level as last year, perhaps even a little lower, and from what one reads in various articles on the subject a small degree of pessimism seems to prevail. However, since I am inclined to be an optimist, I think new vehicle production will equal that of 1956, or perhaps a little more.

It is to be noted that for 1956, new registrations were 98.9 per cent of new production. It is my thought that the vehicle manufacturers will watch the market very closely and keep production close to the registration figures avoiding over production such as occurred in 1955. In 1956, new vehicle production was 6,920,590. My guess for '57 will be a little over 7,000,000. (See Table 4 on Page 11.)

New Vehicle Output

This estimate of over 7,000,000 new vehicle production seems to tie in rather well with figures generated by another factor, that of vehicles scrapped. Over the period of the past five years, the number of vehicles scrapped have held a rather constant percentage both with the previous year's total combined registrations and with the current year's total combined registrations. (See Table 5.) With the former, the range is from 6.7 to 7.4 per cent and the latter, a range from 6.4 to 6.9 per cent, in both instances less than 1 per cent difference. So if we accept these figures, and assuming

TABLE NO. 1
Comparison Predictions With Actual 1956 Figures

	Predicted	Actual	Error	% Error
Total Number Batteries Produced	35,137,000	32,775,291	+ 2,361,709	+ 6.70
Total Number Replacement Batteries	26,357,000	25,014,000	+ 1,343,000	+ 5.10
Total Number Vehicles Manufactured	7,900,000	6,920,590	+ 979,410	+ 12.40
Export Replacement Batteries	400,000	360,701	+ 39,299	+ 9.80
Other (Tractor, Off-Highway, Government, etc.)	480,000	480,000	—	—
Total Registrations	64,663,104	64,601,000	+ 62,104	+ .96
Total New Registrations	7,111,331	6,850,000	+ 261,331	+ 3.70
Number Vehicles Scrapped	4,331,929	4,288,000	+ 43,929	+ 1.00
Average Battery Life in Months	26.7	28.7	— 2 mos.	— 7.50
Average Lead Weight of Batteries (lbs.)	21.6	20.11	+ 1.49	+ 6.90
Ratio of 50-55 A.H. 12 Volt Batteries to 60-70 A.H. 12 volt Batteries	2.95:1	3.55:1	— .6	— 20.00
Lead CONSUMED TONS	416,000	366,131*	+ 49,869	+ 12.00

* Bureau of Mines Preliminary.

TABLE NO. 2
Calculation of Average Lead Weight of a Battery for 1956

*366,131 Tons of leads used in 1956 for all Batteries.
†36,000 Deduct Estimate of Tonnage used for Industrial Types Batteries.

330,131 Tons of Lead Used for Balance of Batteries.
330,131 Tons = 20.11 LBS. AVG. WT.

32,775,291 Units Manufactured (not Industrial) 1956.

* Bureau of Mines Preliminary. † Estimate.

that the vehicles scrapped in 1957 will be 7 per cent of the 1956 total registration figure, or 4,522,000 units, and estimating new vehicle registration at 7,000,000, we find that we develop a total registration for 1957 of 67,079,000 vehicles of which the number of vehicles scrapped amounts to 6.7 per cent, falling well within our allowable limits.

Average Battery Life

As is well known, the average life of a battery plays a very important part in the number of replacement batteries which will be produced and sold each year. Statistics generally used to determine average life very often prove fickle and from year to year can vary sharply. The AABM has since 1940 to date, kept figures in a form called ratio of re-registered cars to replacement batteries. (See Table 6 on Page 18.)

In that period of time according to their calculations the average life of a battery has been as low as 16.3 months to a high of 27.6 months. It is significant to note that the high was in 1956. The formula used by us varies from that of AABM and we develop a higher figure. For 1956 we show 28.8 months as compared to AAEW's figure of 27.6 months. In my humble opinion, neither of the above figures can really be considered accurate, however, each serves as a mathematical approach to an answer that seems to be right. Average life of battery as set out above of 28.8 months is very high, but how else can you explain away the fact that although since 1952 through 1955, there has been an increase of vehicle population of over 9,500,000 units, yet in 1956 only 2,561,000 more replacement batteries were sold than in 1952. (See Table 7 on Page 18.)

In arriving at a figure for total replacement batteries in 1957, we are again resorting to our formula of last year which made an effort to reduce margin of error by separating through a selective method, batteries we felt would be required, from the unknown. We have also used 28.8 months as average battery life. (See Table 8 on Page 18.)

For 1957 replacement batteries, we have a figure of 26,959,781.

It is believed that export battery
(Continued on Page 18)

TABLE NO. 3
Registration for Passenger Cars With 12 Volt Batteries

	(000 — Omitted)			
	1953	1954	1955	1956
Buick	...	513	737	530†
Cadillac	99	110	141	133†
Chevrolet	1,641	1,566*
Olds	305	407	590	438†
Pontiac	530	359*
Packard	52	28†
Studebaker	76*
Hudson	30*
Nash	85*
Chrysler	117†
DeSoto	101*
Dodge	220*
Plymouth	484*
Ford	1,375*
Lincoln	43†
Mercury	274*
Total	404	1,030	3,691	5,859

1956:

* 50-55 A. H. Batteries Total 4,570 — Ratio 3.55:1.

† 60-70 A. H. Batteries Total 1,289.

TABLE NO. 4
Relationship Between Total Combined Production
and New Combined Registrations

Year	Production*	Registrations*	Percentage of Production
1951	6,765,263	6,064,753	89
1952	5,538,959	4,970,493	90
1953	7,323,214	6,689,301	91
1954	6,601,071	6,364,565	96.5
1955	9,169,144	8,126,909	88.8
1956	6,920,590	6,849,614	98.9
+1957	7,142,800	7,000,000	98

* Automotive Industries. † Estimate.

TABLE NO. 5
Relationship Between Number of Vehicles Scrapped
and Total Combined Registrations

Year	Total Combined Registrations*	Number Vehicles Scrapped	Percentage Previous Year's Total Registrations	Percentage Current Year's Total Registrations
1952	52,454,376	3,473,629	6.8	6.6
1953	55,594,734	3,528,943	6.7	6.4
1954	58,050,130	3,909,169	7.0	6.8
1955	62,039,509	4,291,337	7.4	6.9
1956	64,601,000	4,288,000	6.9	6.6
1957†	67,079,000	4,522,000	7.0	6.7

* Automotive News. † Estimate.

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U. K. COPPER CONSUMERS CONTINUE CAUTIOUS BUYING POLICY AS WORLD METAL OUTPUT TOPS CONSUMPTION

Tin Surplus Materializing Slower Than Had Been Expected; Lead, Zinc Markets Are Depressed by Suspension of U. S. Barter Program

May 6, 1957

FAIRLY early in April, after the Chilean and Rhodesian strikes were settled, copper prices on the London market settled down again at around the £240 level (30 cents per pound) and in the last three or four weeks have remained very steady. This has undoubtedly been helped by some fairly considerable buying on the London market which is attributed to producer interests for the purpose of stabilizing prices.

So far, it has not had the desired effect of encouraging consumers to re-enter the market on a substantial scale, as users are not yet fully convinced that price stability in this metal has been finally achieved. It is generally held that world production is running ahead of consumption, and that the gap may widen as the year goes on through increased output, unless some definite steps are taken by producers to curtail production to a greater extent than has so far been the case.

Buyers Cautious

It is for this reason that there seems to be a general tendency in all the main consuming areas for buyers to operate as cautiously as possible until the further price outlook seems clearer.

On the consuming side, the situation here has been improved by the higher rate of activity in the motor car industry which must obviously be of benefit to the brass mills, but in other directions, although the British economic outlook seems rather better than was feared would be the case when the year opened, there are some rather dull spots. Fabricators generally are finding considerable difficulty in keeping their order books as well filled as they were in 1956.

American Export Price

Although the U. S. domestic producers are steadily holding their quotations at 32 cents per pound it is noticeable that the American export price has kept in very close alignment with London Metal Exchange quotations, and that the custom smelters have also had to bring their selling prices down closer to the London level.

It is no doubt true that consumer stocks in America and in Europe have been appreciably reduced in recent months and that if once there were a change in sentiment, a good deal of buying potential has probably developed. However, experience has shown that so long as users are of the opinion that the supply position is easy and there is a greater probability of an easing in prices, than of a

By L. H. TARRING
London, England

RST PRICE CHANGES

Changes in the Rhodesian Selection Trust's fixed electrolytic copper price, since it was established on May 9, 1955, and applicable to the RST's regular customers in the U. K. follow:

Date of Change	Pounds Sterling (Long Ton)	Equivalent in Cents Per Pound
1955		
May 9	280	35.00
August 2	325	40.625
September 5	360	45.00
1956		
February 27	385	48.125
April 30	350	43.75
May 28	320	40.00
June 18	300	37.50
July 2	275	34.375
August 1	300	37.50
October 15	280	35.00
October 24	265	33.125
November 12	280	35.00
December 17	270	33.75
1957		
February 1	250	31.25
February 19	240	30.00

rise, they are quite capable of jogging along on minimum reserves for extended periods.

The fact that, in America, serious consideration is being given to the possibility of including copper as one of the metals to be acquired under barter transactions involving surplus U. S. farm products, has naturally aroused interest over here. If it were decided to do so, it would probably have a material effect on the marginal supply position and on market sentiment.

Mutual Pricing Policy

Discussions are believed to be continuing between the two big Rhodesian producing groups in the search for a mutually acceptable pricing policy.

U. K. COPPER STATISTICS

	Feb. 1957	—Jan.—Feb.— 1956	1957
Stocks of blister copper in the U. K. at the end of February at 15,007 tons showed a considerable decline on the end January stocks of 17,794 tons. Stocks of refined copper, on the other hand, showed a large increase at 47,113 tons (of which 31,503 tons held by consumers and 3,288 tons in L. M. F. approved warehouses) compared with only 41,409 tons at the end of January. Imports of blister during the month totaled 7,178 tons and refined 27,413 tons. Production of primary refined was 9,980 tons and secondary 7,342 tons.			
Consumption during the month, full details as supplied by the British Bureau of Non-Ferrous Metal Statistics appear below, was 56,040 tons.			
Unalloyed Copper Products			
Wire (1)	24,818	43,814	51,931
Rods, Bars & Sections	1,412	3,480	3,063
Sheet, Strip & Plate	4,623	10,374	10,305
Tubes	4,688	8,812	9,606
Castings & misc.	650	1,300	1,300
Allloyed Copper Products			
Wire	1,363	3,397	2,963
Rods, Bars & Sections	10,295	25,154	20,747

icy for their main U. K. customers. So far, agreement does not seem to have been reached and if it is, the reaction of the consumers concerned has still to be ascertained.

It will no doubt be recalled that so far, a scheme put forward jointly by the producers was rejected by the users and alternative proposals made by consumers proved unacceptable to the producers. At the present time there is very little difference between the prices paid under the two systems at present in operation, namely a fixed price by the Rhodesian Selection Trust group and the use of LME quotations by the Anglo-American Corp. of South Africa.

But this does not alter the fact that in the past there have been wide variations between the two prices and the continuation of a dual pricing system has really very little to recommend it.

Tin Backwardation

With tin prices on the London market moving within a £10 range during the past month, the main point of interest from a price point of view, is the virtual disappearance of the backwardation. This, of course, is attributable to the increased U. K. smelter output of tin, which has followed the receipts of larger quantities of Bolivian ore for treatment since the Texas City smelter closed, and has made more cash tin available to the market.

It is an interesting fact, that although consumer demand generally, and notably in the United States, has been rather unimpressive recently, the expected surplus in supplies is materializing less rapidly than had been anticipated. In some quarters it is even being doubted whether, over the whole year, there will be any sub-

Note:	Feb.	—Jan.—Feb.—	Feb.
(1) Consumption of H. C. copper and cadmium wire rods for wire and production of wire rods for export.	1957	1956	1957
(2) Virgin and secondary refined copper.	7,734	22,303	16,574
(3) Consumption of refined copper (2)	1,740	3,791	3,614
Castings & misc.	6,470	13,698	13,525
Copper Sulphate	4,009	9,140	8,628
Total all products	67,802	145,173	142,256
Copper Content of Output		56,040	116,404
Consumption of Refined copper (2)		43,326	86,610
Consumption of copper & alloy scrap (3) (copper content)		12,714	29,794
			23,184

Note:
(1) Consumption of H. C. copper and cadmium wire rods for wire and production of wire rods for export.
(2) Virgin and secondary refined copper.
(3) Consumption of copper in scrap is obtained by the difference between copper content of output and consumption of refined copper, and should be considered over a period since monthly figures of scrap consumption are affected by variations in the amount of work in progress.

METALS, MAY, 1957

AVERAGE BRITISH PRICES FOR COPPER, TIN, LEAD, ZINC (Per Long Ton)

Mean of Bid and Asked Cash Quotation at Close of Morning Session on London Metal Exchange

	COPPER			TIN			LEAD			ZINC		
	Cash	3 Months	Settlement	Cash	3 Months	Settlement	Current Month	3rd Following	Current Month	3rd Following	Current Month	3rd Following
1954 Averages	248 17 11	239 17 7	249 0 11	719 8 11	709 17 7	720 6 7	98 8 12	94 7 4	78 5 4	77 16 11	90 13 4	89 12 3
1955 Averages	351 14 11	341 0 3	352 5 6	740 2 12	736 12 11	740 12 8	105 17 3	105 9 6	90 13 4	89 12 3	97 14 3	95 3 7
1956 Averages	328 14 5	324 13 1	329 1 8	787 14 9	774 7 7	788 13 3	116 6 5	114 8 9	97 14 3	95 3 7		
1957												
January	265 17 11	264 14 4	266 3 2	789 3 2	771 10 5	789 16 4	116 5 1	114 10 8	103 5 1	98 13 8		
February	245 11 2	244 2 0	245 16 3	770 16 9	752 9 6	771 8 6	113 3 0	112 6 11	99 8 11	96 17 0		
March	239 10 11	239 2 9	239 14 6	770 14 6	756 8 7	771 7 2	113 2 1	112 6 11	96 12 3	94 15 9		
April	241 19 2	242 15 9	242 2 0	774 4 9	768 7 6	774 17 6	111 17 5	111 14 1	98 7 6	94 13 5		

stantial excess of production over consumption.

Bolivian, Indonesian Output

One reason for this view is that output in Bolivia and Indonesia is expected to fall away further during 1957, whereas consumption seems to be holding up very well, thanks mainly to the high rate of activity in the world's tinplate industry.

On the other hand, it is as well to bear in mind that there are 2,500 tons of tin to come out of the British Government's stockpile from June onwards, and some people consider it possible that larger quantities of Russian tin will be shipped to the U. K.

U. K. TIN STATISTICS

At the end of February stocks of tin in the U. K. were slightly higher at 3,169 tons (1,536 tons held by consumers) against the 2,878 tons at the end of January. Imports during the month totaled only 25 tons, and production of primary tin was 2,688 tons and 33 tons of secondary.

Consumption totaled 1,936 tons, full details of which are given below as supplied by the British Bureau of Non-Ferrous Metal Statistics.

	Feb	—Jan.—	Feb
	1957	1956	1957
Tinplate	971	1,750	2,107
Tinplate:			
Copper Wire	41	99	89
Steel Wire	8	19	16
Other	64	151	128
Total	113	260	237
Solder	198	510	407
Alloys:			
Whitemetal	240	496	467
Bronze & Gunmetal	215	488	430
Other	30	68	65
Total	485	1,052	962
Wrought Tin (1):			
Foil & Sheets	25	65	55
Collapsible Tubes	30	66	64
Pipes, Wire & Capsules	4	9	16
Total	60	140	135
Chemicals (2)	101	180	266
Other uses (3)	8	26	29
	1,936	3,918	4,370

Notes:

- (1) Includes Compo and "B" Metal.
- (2) Mainly Tin Oxide.
- (3) Mainly Powder.

and elsewhere this year, which is an interesting, and possibly important development, but one which cannot be accurately assessed, owing to complete uncertainty as to the state of tin production in the U. S. S. R.

Buffer Stock

Prices during the past month have ruled at a level which make purchases by the Buffer Stock manager a possibility, and there have been rumors from time to time of such buying. There is, however, no means of ascertaining the accuracy of these reports, and if there has, in fact, been any such buying, it is generally believed to have been only on a very limited scale. Some people believe that if, after their rather long period of quietness, American consumers were to re-enter the market on an appreciable scale, there might be quite a sharp upward reaction in prices, at any rate for a time.

U. S. Stockpile Plan

Although it is perhaps not quite as vulnerable as zinc, the lead market was considerably affected by the uncertainties which arose recently over the continuance of the American Government's stockpiling purposes.

It has been common knowledge, of course, for quite a long time, that without this American Government support, it is extremely doubtful whether prices would have been able to hold their recent level, and the mere threat that this buying might end in the not very distant future, caused something of a shake-out here, and brought quotations down to rather below American import parity. How long this state of affairs will continue is anybody's guess, but it is hoped that before long some definitive statement may be forthcoming on the U. S. mineral policy on a long term basis, which will enable a real-

istic appraisal of the market to be made.

Consumption Maintained

On the whole, lead consumption is quite well maintained, and buying was fairly regular until the development referred to above, which has naturally made users very cautious for the time being.

U. S. Barter Deals

In zinc all other considerations have been overshadowed in the last week or two by the fears that the U. S. domestic stockpiling program for zinc might end in the near future and by a temporary suspension of barter transactions.

In view of the obvious surplus of (Continued on Page 18)

U. K. LEAD STATISTICS

Stocks of both imported virgin lead and English refined at the end of February at 24,378 tons (17,998 tons held by consumers and 209 in L. M. E. approved warehouses) and 12,522 tons (6,188 tons held by consumers) respectively showed a decrease on the end January stocks of 27,935 tons and 13,498 tons. 16,049 tons of virgin lead were imported during the month and production of English refined was 7,370 tons.

Consumption was 29,219 tons, full details of which are given in the following table:

	Feb	—Jan.—	Feb
	1957	1956	1957
Cable	9,797	18,813	19,480
Batteries — as metal	2,587	5,040	4,626
Battery Oxides	2,189	5,167	4,281
Tetraethyl Lead	1,684	3,883	3,444
Other Oxides and compounds			
Pound	2,163	4,374	4,151
White Lead	678	2,051	1,558
Shot	358	837	815
Sheet and Pipe	5,354	11,868	11,527
Foil and Collapsible			
Tubes	344	927	854
Other Rolled and Extruded			
Solder	531	1,309	1,153
Alloys	1,004	2,147	2,141
Miscellaneous uses	1,538	2,592	2,853
Total consumption	29,219	61,137	58,876

Of which:

- Imported Virgin Lead 12,367 32,711 27,288
- English Refined 7,173 13,821 13,987
- Scrap including remelted 9,679 14,605 17,691

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United States Duties on Principal Ore and Metal Imports

(Including Revisions in Effect June 30, 1956, Under Geneva Agreements)

(Quantities Are in Pounds Unless Otherwise Stated; n.s.p.f. Stands for "Not Specially Provided For.")

COPPER

NOTE — The excise tax of 4c a pound on copper (which was reduced to 2c a pound by the Geneva Trade Agreement) was suspended in April, 1947, until March 31, 1949, and on expiration it was further suspended until June 30, 1950. The tax was reimposed on July 1, 1950. It was suspended again on May 22, 1951, retroactive to April 1, 1951, and until February 15, 1953, and again until June 30, 1954. Suspension further extended to June 30, 1955, and again until June 30, 1958. If import tax is restored, the 1956 Geneva Agreement provides for 5% reductions effective on June 30 of 1956, 1957 and 1958, provided the price is above 24c; if the price is below 24c the 2c tax would prevail.

Copper ore and concentrates, usable as flux, etc., copper content	free
Copper ore and concentrates, product of Cuba and Philippines, copper content	free
Copper ore and concentrates, copper content	free
Regulus, black, or coarse copper, and cement copper, copper content	free
Unrefined black, blister, and converter copper in pigs or converter bars, copper content	free
Refined copper in ingots, plates or bars, copper content	free
Copper rolls, rods or sheets	1 1/4c lb.
Copper seamless tubes and tubing	3 1/2c lb.
Copper plain wire	12 1/2%
Copper brazed tubes†	5 1/4c lb.
Old and scrap copper, fit only for remanufacture; and scale and clippings, copper content	free

BRASS

Brass rods, sheets, plates, bars, strips, Muntz or yellow metal sheets, sheathing, bolts, piston rods, shafting and bronze rods, tubes and sheets	2c lb.
Brass tubes and tubing, seamless	2c lb.
Brass tubes, brazed, angles and channels	6c lb.
Brass and bronze wire	12 1/2%

LEAD

NOTE — Import duties on lead-bearing ores, flue dust, and mattes of all kinds, lead bullion or base bullion, lead in pigs and bars, lead dross, reclaimed lead and antimonial lead were suspended February 12, 1952, and reimposed on June 26, 1952. Lead scrap duty was reimposed July 1, 1952.

Lead-bearing ores and mattes, n. s. p. f., lead content	3/4c lb.
Bullion or base bullion, lead content	1 1/16c lb.
Pigs and bars, lead content	1 1/16c lb.
Reclaimed, scrap, dross, lead content	1 1/16c lb.
Babbitt metal and solder, lead content	1 1/16c lb.
Pipe, sheets, shot, glaziers' lead, and wire	1 5/16c lb.
Type metal and antimonial lead, lead content	1 1/16c lb.
White lead	1.05c lb.
Litharge	1 1/4c lb.
Red lead	15/16c lb.
Orange mineral	1c lb.

ZINC

NOTE — Import duties on zinc-bearing ores, and on zinc in blocks, pigs and slabs were suspended February 12, 1952, and reimposed on July 24, 1952. Tax on old zinc and dross and skimmings reimposed July 1, 1953.

Zinc-bearing ores, except pyrites containing not more than 3% zinc, zinc content	6/10c lb.
Zinc contained in zinc-bearing ores, n. e. s., not recoverable, zinc content	6/10c lb.
Zinc, old and worn out, fit only for remanufacture	3/4c lb.
Dross and skimmings	3/4c lb.
Zinc in blocks, pigs or slabs	7/10c lb.
Zinc in sheets	1c lb.
Zinc sheets, plated with nickel or other base metal, or solutions	1 1/8c lb.

Zinc dust	7/10c lb
Zinc die-casting alloys	12 1/2%
Zinc oxide and leaded zinc oxides containing not more than 25% lead, dry	3/5c lb.
ground in or mixed with oil or water	1c lb.

MISCELLANEOUS METALS AND ORES

Aluminum, metal and alloys, crude, except alloys elsewhere provided for†	1.40c lb.
Aluminum scrap	free
Aluminum plates, sheets, bars, rods, circles, squares, etc.†	2.80c lb.
Antimony ore, antimony content	free
Antimony metal and regulus	2c lb
Antimony needle or liquidated	1 1/4c lb
Antimony oxide	1c lb
Antimony sulphides	1/2c lb. & 12 1/2%
Arsenic, metallic†	2.80c lb
Arsenious acid or white arsenic	free
Bauxite, crude*	free
Bauxite, refined**	1/4c lb.
Bismuth	1 1/8%
Bismuth salts and compounds .....	.35%
Beryllium metal and compounds†	23 1/2%
Beryllium ore	free
Cadmium	3 3/4c lb.
Cadmium flue dust, cadmium content	free
Chrome ore or chromite	free
Chrome or chromium metal†	11 1/2%
Cobalt metal	free
Cobalt ore and concentrates, cobalt content	free
Magnesium, metallic†	17.20c lb.
Magnesium alloys, powder, sheets, wire†	19c lb. & 9 1/2%
Magnesium scrap	free
Manganese ores, containing over 10% manganese, manganese content	1/4c lb., except Cuba, free
Molybdenum ore or concentrates, molybdenum content†	33c lb.
Nickel ore, matte and oxide	free
Nickel and alloys, nickel chief value, n. s. p. f., in pigs, ingots, shot, cubes, grains, cathodes, or similar forms	1 1/4c lb.
Nickel, bars, rods, plates, sheets, castings, strips, wire or electrodes	12 1/2%
Nickel scrap	free
Nickel tubes, tubing	6 1/4%
Tin ore, cassiterite, and black oxide of tin, tin content	(if cold rolled, drawn or worked — 2 1/2% extra) free
Platinum, grain, nuggets, sponge and scrap, oz. troy	free
Platinum in ingots, bars, sheets, or plates, not less than 1/8 in. thick, oz. troy	free
Platinum, ores, platinum content, oz. troy	free
Quicksilver or mercury	25c lb.
Selenium and salts	free
Tantalum	12 1/2%
Tin ore, cassiterite, and black oxide of tin, tin content	free
Tin in bars, blocks, pigs, grain, granulated, and scrap, and alloys, chief value tin, n. s. p. f.	free
Tungsten ore or concentrates, tungsten content	50c lb.

*Crude bauxite import duty suspended to July 15, 1958. **Under Public Law 25 alumina imported for use in aluminum production is free for entries from July 17, 1956 to July 16, 1958. †Tariff to be reduced 5% on June 30, 1957 and 5% on June 30, 1958, under Geneva Agreement which expires on June 30, 1959.

METAL PRICES DIP IN U. S.; SMELTER COPPER CUT TO 30c POUND, LEAD TO 15c, P. W. ZINC TO 11½c

Declines Attributed to Lack of Demand Plus Suspension of Gov't Barter Program; Tin Easier; Germanium Reduced; Silver Unchanged

May 16, 1957

PRICE CHANGES were not lacking in the metal market during the month in review, and they were all downward. Absence of real consumer demand plus other factors resulted in declines for copper (custom smelter), lead and zinc.

Smelter electrolytic copper was available at 30.00c a pound on May 9, down 1.00c from the price last previously quoted in this space. Lead dipped 0.50c on May 9 to 15.50c a pound New York and another 0.50c to 15.00c on May 16, and Prime Western zinc slumped 2.00c in two stages, by 1.50c on May 6 and by 0.50c on May 13 to 11.50c a pound East St. Louis. Contributing causes to the declines for lead and zinc were the "temporary" suspension of bartering of U. S. Government-owned surplus farm products for these metals of foreign origin and uncertainty concerning the duration of the stockpile buying program for both metals of domestic origin.

Straits tin also was weaker, with spot metal quoted at 98.375c a pound New York on May 15, after touching 100.25c on April 25. Germanium prices declined on May 9. Platinum, in the dealer market, was easier. Primary aluminum was unchanged but secondary aluminum was weaker. Silver and quicksilver were steady.

Smelter Copper 30c

Custom smelter electrolytic copper sold at 30.00c a pound delivered on May 9, the lowest price at which copper has sold since January, 1955. The smelter price last quoted in this space was 31.00c, as of April 12. On May 2 it dipped to a range of 30.50-31.00c, to 30.50c on May 3, and down another 0.50c to 30.00c on May 9.

Having failed to attract consumers at the 30.50c level, and with some fabricators indicating that at 30.00c they might be willing to place business, smelters reduced it to that figure. There is now a spread of 2.00c a pound between the producers' price and that of custom smelters.

In the past when the spread has been as great as it is at this writing, producers came down somewhat in their quotation although not to as low a point as the smelters. What the producers, still at 32.00c a pound delivered, will do pricewise, depends largely on developments in the brass end of the business. Competition in the brass field has been pretty keen recently, and those fabricators who buy their copper from smelters at 30.00c a pound have a distinct advantage over their competitors who buy from producers at 32.00c.

Even before smelters lowered their selling price of electrolytic copper to 30.00c, they had reduced their scrap copper buying prices, to a basis of

24.50c a pound for No. 2 heavy copper and wire on May 9. On May 14 No. 2 scrap copper was at 24.25c a pound. Brass and bronze ingot makers made similar reductions in their scrap buying prices.

Brass Ingot Prices Reduced

Brass and bronze ingot prices were reduced by leading manufacturers on May 15. Ingot makers reduced their selling prices by 0.25c to 2.00c a pound for most grades but the nickel group (410 through 414) was sharply cut by 2.00c to 10.00c a pound.

Brass Mill Products Cut

Significant of the competition in the brass mill industry is the expedience the mills displayed in reducing their selling prices for mill items containing zinc when the Prime Western quotation was sliced 1.50c to a basis of 12.00c East St. Louis on May 6 and again on May 13 when zinc was cut another 0.50c. Fabricators also cut their brass mill scrap buying prices for grades containing zinc.

At a meeting in Cincinnati on May 9, William A. Meissner, Jr., deputy director, Copper Division, Business and Defense Services Administration, cited reasons for "the free and easy copper situation." Contributing causes, he said included: the Government encouraged expansion in marginal mining, exploration of new mines and other means to increase the U. S. primary domestic refined copper supply; there were no labor troubles which might have cut output; the unprecedented European demand apparently has been satisfied, and the decline in residential housing starts, automotive production and inventory adjustment on the part of producers of consumer durable goods, resulted in reduced domestic demand.

Charles R. Cox, Kennecott Copper Corp. president, was of the opinion, however, "that copper is worth more than 32.00c a pound." He said he was bullish on the copper outlook, that the upturn in business that had been anticipated during the first six months of this year has been only partially realized and that "I believe that business in the second half of the current year, excluding July which is a vacation month, will be stronger."

Lead 15.00c New York

The price of lead was reduced 0.50c a pound on May 9 and again on May 16 to 15.00c a pound New York. The May 9th change in the quotation, the first since January, 1956, when the 16.00c level was established, was a surprise only in the size of the decline, notably in view of the 1.50c reduction for zinc. The drop in price failed to bring consumers immediately into the market which is usually what happens when there is a price decline. The tendency on the part of buyers is to wait and see whether the market has stabilized before entering

into commitments at a firm price. Business that was done following the price decline was at the May average.

Domestic lead producers, explaining why the price drop for the metal was not as steep as in the case of zinc, pointed out that lead has been in a far better statistical position than has zinc. In cutting their lead price, sellers also may have been influenced by cable advices from abroad that if the domestic quotation should hold at 15.50c a pound, the price on the London Metal Exchange, which had slumped, was likely to snap back. Another reason for the mild price decline is the anticipation that the Government will probably resume its barter deals. That in itself would have a firming influence on the market. But on May 16 sellers, in an effort to attract business, moved down to 15.00c.

Some 24 mining concerns in the Coeur d'Alene district, meanwhile, have wired Government agencies to resume barter deals. The wire stated that unless the barter program is resumed and continued until a long-range mineral program is adopted, "there will be further zinc price decreases and accompanying lead price declines resulting in a speed-up of the trend over the last several years of permanent lead and zinc mine closures."

Smelting Plant Reopens

Eagle-Picher Mining & Smelting Co. reopened its Henryetta, Okla., smelting plant on a trial basis on May 9. The plant was closed April 29 when Eagle-Picher shut down its zinc mining and mill operations in the Tri-State area of Missouri, Kansas and Oklahoma.

Company officials at that time said operations were being curtailed because production of zinc exceeded consumption. A company spokesman, concerning reopening of the Henryetta plant, emphasized that its operation will depend on the domestic market situation. There was no indication when the firm's Tri-State mines and mills would reopen.

Zinc Declines 1.50c

The price for zinc plummeted 1.50c on May 6 to a basis of 12.00c a pound East St. Louis for the Prime Western grade. On May 13, two sellers moved down another 0.50c to a basis of 11.50c. At 11.50c the price was at the lowest level since April 4, 1955. The price action was attributed to the suspension of the Government barter program and lack of definite word as to how long the Government would continue buying lead and zinc for the long-term stockpile. Smelters held off cutting the price as long as they could. But when on May 6 the London price declined to almost 1.50c a pound below the domestic quotation even allowing for the freight and the import duty of 0.75c a pound, it was patent

they could not hold at the 13.50c level which was established on January 5, 1956.

Two custom smelters on May 13 cut their Prime Western price to 11.50c East St. Louis. Other sellers did not immediately follow so that a range of 11.50c to 12.00c prevailed for May 13. By May 14, the high side of the range had disappeared. Sellers hoped, by making drastic cuts, to restore consumers' confidence in the market. Consuming demand has been light due to lessened demand by the galvanizers, a slowdown in demand by the automotive industry for die casting metal, and also because of the reduced rate of brass mill operations.

Lead, Zinc By-Products

The price declines for lead and zinc brought reductions in these metals' by-products. Lead sheet and pipe and lead oxides were all reduced 0.50c a pound. Zinc die casting alloys and zinc dust were cut 2.00c, and zinc plates and ribbon zinc were reduced 0.50c.

April Zinc Statistics

The statistical position of zinc continued to grow progressively worse, chiefly because production was being maintained at a high level whereas consumption has been on the decline, resulting in surplus stocks which are now at the highest level since January, 1955.

April statistics for all grades of zinc, in tons, with the March totals in parentheses, follow: production, 96,506 (96,924); shipments to con-

sumers, export and drawback and for Government account, 80,264 (94,607); shipments to consumers, 55,182 (67,441); stocks at end of month, 105,599 (89,357); unfilled orders at end of month, 42,102 (56,818).

No Tin Backwardation

The virtual disappearance of the backwardation in tin on the London Metal Exchange was attributed to the increased U. K. smelter output resulting from the larger receipts of Bolivian ore that was formerly treated in the Texas City, Texas smelter. That has made more cash tin available to the market. Also, it should be borne in mind that 2,500 tons of tin are scheduled to come out of the British Government's stockpile beginning with June which will further augment the spot supply.

The domestic tin market has been on the quiet side of late. Spots Straits tin on May 15 closed at 98.375c a pound New York, compared with the last previously quoted price in this space of 99.00c for April 8. The high for the April 8-May 15 period was the 100.25c for April 25, and the low of 98.25c was registered on May 8, 9 and 14.

Secondary Aluminum Easier

The secondary aluminum market, which has become increasingly competitive, continued to weaken. Indicative of the fact that primary aluminum production was more than meeting demand, some 200,000 tons of virgin metal were "put" to the

Government under supply contracts of the Defense expansion program before the cut-off date on April 10. Actually, "puts" totaling up to about 600,000 tons could have been made under the current contracts.

Germanium Prices Cut

Two producers of germanium announced price reductions, effective May 9. Eagle-Picher Company's new prices, per kilogram, are: first reduction metal, \$435, a decline of \$50; intrinsic grade, \$485, also down \$50, and dioxide grade, \$240, off \$35.

Sylvania Electric Products Inc. reduced its purified polycrystalline germanium metal price to \$435 per kilogram, a reduction of \$50, and its dioxide quotation was cut to \$275, down \$25.

Platinum \$91-\$95 Ounce

Platinum was offered at \$91 per ounce in wholesale lots and \$95 in retail quantities, which range was established on May 1. Refiners were still at \$92-\$95 but larger quantities in the dealer market were quoted at \$91.

Quicksilver Steady

Spot quicksilver was unchanged at \$255 to \$257 per flask of 76 pounds. This range was established on November 14 of last year. Domestic consumer buying remained on the light side.

Silver Unchanged

The New York silver price continued to hold at 91.375c an ounce, which level was established on October 17, 1956.

NATIONAL BUSINESS PUBLICATIONS

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WASTE TRADE JOURNAL (Weekly) — The leading market authority on scrap and waste materials of all kinds. Read by producers, dealers and consumers all over the world.

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MINES REGISTER — Successor to the Mines Handbook (est. 1900). A detailed description of over 7,500 active metal mines and listing approximately 22,000 mining companies of North, Central and South America.

WIRE SERVICE — A special telegraph and telephone service on market developments and price changes in copper, tin, lead, zinc, aluminum, iron and steel.

WORLD CHEMICAL DIRECTORY — An International Index of importers, exporters and manufacturers of chemicals, drugs, plastics, oils, etc. Commodity Listings in French, Spanish and English. Contains four sections — Commodity Index — Commodity Classifications — Geographical Section — Brand and Trademark Section — all important sources of supply and distribution for international trade.

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NATIONAL BUSINESS PRESS

425 West 25th Street, New York 1, N. Y.

Daily Metal Quotations in April, 1957

The following quotations are taken from the Daily Metal Reporter
(In Cents Per Pound)

	Copper	Tin Straits New York	Lead	Zinc	Alumi- num	Anti- mony	Silver
1	32.00	31.50	31.35	32.00	99.00	99.00	16.00
2	32.00	31.75	31.35	32.00	98.875	98.875	16.00
3	32.00	31.75	31.35	32.00	98.875	98.875	16.00
4	32.00	31.50	31.35	32.00	98.375	98.375	16.00
5	32.00	31.50	31.35	32.00	98.50	98.50	16.00
6	32.00	31.50	31.35	32.00	98.875	98.875	16.00
8	32.00	31.50	31.35	32.00	98.875	98.875	16.00
9	32.00	31.50	31.35	32.00	98.875	98.875	16.00
10	32.00	31.50	31.35	32.00	98.875	98.875	16.00
11	32.00	31.50	31.35	32.00	99.25	99.25	16.00
12	32.00	31.25	31.35	32.00	99.125	99.125	16.00
13	32.00	31.25	31.35	32.00	99.875	99.875	16.00
15	32.00	31.00	31.10	32.00	99.625	99.625	16.00
16	32.00	31.00	31.10	32.00	100.00	99.875	16.00
17	32.00	31.00	31.10	32.00	100.00	99.875	16.00
18	32.00	31.00	31.10	32.00	99.875	99.875	16.00
20	32.00	31.00	31.10	32.00	99.625	99.625	16.00
22	32.00	31.00	31.10	32.00	99.625	99.625	16.00
23	32.00	31.00	31.10	32.00	99.625	99.625	16.00
24	32.00	31.00	31.10	32.00	100.00	100.00	16.00
25	32.00	31.00	31.10	32.00	100.25	100.25	16.00
26	32.00	31.00	31.10	32.00	99.75	99.75	16.00
27	32.00	31.00	31.10	32.00	99.25	99.25	16.00
29	32.00	31.00	31.10	32.00	98.50	98.50	16.00
30	32.00	31.00	31.10	32.00	98.50	98.50	16.00
AV.	32.00	31.24	31.22	32.00	99.304	99.286	16.00
HI.	32.00	32.00	31.60	31.00	100.25	100.25	16.00
LO.	32.00	31.00	30.60	30.00	98.375	98.375	16.00

Storage Battery Lead Use to Increase This Year

(Continued from Page 11)

figures and the number of batteries for such equipment as heavy tractors, off-highway and for the Government will remain about the same, and such is assumed.

So in summation, I offer you the following:

Batteries That Will Be Produced in 1957

	Units
1. Domestic Replacement	26,960,000
2. Original Equipment (Automotive, Truck & Bus)	7,143,000
3. Export Replacement	400,000
4. Other (Original Equipment Tractor,	

Off-Highway, Government, etc.) 480,000

Total 34,983,000

Using 20.11 pounds as the average battery weight and anticipating a usage of approximately 35,000 tons of lead for industrial type batteries, I come to approximately 387,000 tons of lead to be used in storage batteries in 1957.

TABLE NO. 6
Ratio of Re-Registered Cars to Replacement Batteries*

Year	Months	Year	Months
1940 — 1.92	23.04	1949 — 2.09	25.1
1941 — 1.85	22.2	1950 — 1.78	21.4
1942 — 2.03	24.4	1951 — 2.03	24.4
1943 — 1.78	21.4	1952 — 2.12	25.4
1944 — 1.56	18.7	1953 — 2.06	24.7
1945 — 1.72	19.6	1954 — 2.25	27.1
1946 — 1.79	21.5	1955 — 2.08	25.
1947 — 1.36	16.3	1956 — 2.30	27.6
1948 — 1.52	18.6		

* AABM.

TABLE NO. 7
Calculation to Determine Average Life of Battery for 1956

(000 — Omitted)

Percentage Arbitrary, Chosen as per Estimated Need:

Percentage	Number		
5	4,288	Cars Scrapped 1956	214
1	6,849	New Registration 1956	68
20	8,127	New Registration 1955	1,625
80	6,365	New Registration 1954	5,092
Cars known to require Batteries			6,999
Cars which will not require batteries and to be deducted from 1956			6,849
			8,127
			6,365
1956 Total Registration			21,341
Total Registration 1956			64,601
Deduct cars not requiring batteries			21,341
Potential Battery Market			43,260
Actual Replacement Shipments 1956			25,014
Deduct cars known to require batteries			6,999
43,260 x 12			18,015
= 28.8 months Average Life of Battery.			
18,015			

TABLE NO. 8
Calculation to Determine 1957 Domestic Replacement Batteries

Assumption — Below Will Require Batteries in 1957	Batteries Required
5% of Vehicles Scrapped in 1957 — 4,522,000	226,100
1% of New Vehicle Registration 1957 — 7,000,000	70,000
20% of New Vehicle Registration 1956 — 6,850,000	1,370,000
80% of New Vehicle Registration 1955 — 8,125,909	6,500,727

Total 8,166,827

Deduct from 1957 Estimated Total Registrations, the sum of 1957, 1956, 1955 New Vehicle Registrations. Estimated 1957 Total Registrations 67,079,000 Deduct 21,975,909

Potential 45,103,091

Multiply potential by 12, divide by average life of battery, then add to result number of batteries known to be required:

45,103,091 x 12 = 18,792,954

28.8 8,166,827

Domestic Replacement 26,959,781

British Metal Markets

(Continued from Page 13)

world production over consumption of this metal, it is hardly surprising that the market reacted fairly sharply to the possibility of its major prop being removed. Although some statements have been reported, apparently of a reassuring kind, the news that some producers in America have slashed their quotations to 12 cents a pound, certainly has not helped sentiment on this side of the Atlantic.

G.o.b. Zinc Tight

Although there have been some moderate quantities of Continental metal coming here, including Polish, deliveries against American barter transactions have, on the whole, tended to keep the London market rather short of g.o.b. zinc. The backwardation has narrowed somewhat, but it is still wider than is desirable in a futures market, at any rate from the hedging point of view.

As far as actual consumption in the U. K. is concerned, this has improved by virtue of the better rate of operations in the motor car industry, but the crucial question to which everyone is awaiting an answer, is what is to happen to the considerable world surplus production in the coming months.

U. K. ZINC STATISTICS

The British Bureau of Non-Ferrous Metal Statistics reports a slight drop in stocks of zinc in the U. K. at the end of February at 38,927 tons (of which 19,081 tons held by consumers and 825 tons in L. M. E. warehouses) compared with 40,501 tons at the end of January. Imports during the month totaled 10,908 tons and product of virgin zinc was 5,631 tons.

Consumption during February, full details of which are given below, was 26,276 tons.

	Feb. —Jan.-Feb.—
Brass	1957 1956 1957
	8,087 20,580 16,851
Galvanizing	9,118 18,927 19,289
of which:	
General	2,876 6,001 5,958
Sheet	3,217 5,514 7,141
Wire	1,786 3,900 3,484
Tube	1,239 3,512 2,706
Rolled Zinc	2,173 3,902 4,350
Zinc Oxide	2,225 5,429 4,700
Zinc Diecasting & Forming Alloy	2,671 6,974 5,592
Zinc Dust	981 1,543 1,944
Miscellaneous uses	1,021 1,992 2,035
Total all trades	26,276 59,347 54,761
of which:	
Slab Zinc High Purity (99.99%)	3,114 7,723 6,603
Electro & High Grade (99.95%)	4,853 12,479 10,070
Prime Western g.o.b. & debased	10,638 22,617 22,876
Remelted Zinc	566 959 1,243
Brass & other copper alloy scrap (zinc content)	3,900 9,193 7,740
Scrap zinc metal, alloy, residues, etc. (zinc content)	3,205 6,376 6,229

METALS, MAY, 1957

Copper Brands

Deliverable Against Commodity Exchange, Inc.

Brand or Marks	Producer	Grade	Brand or Marks	Producer	Grade
B. E. R.	American Smelting & Refining Co. (Baltimore, Md.)	Electrolytic	C & H	Calumet & Hecla Consolidated Copper Co.	Lake
P. A.	American Smelting & Refining Co. (Maurer, N. J.)	Electrolytic	C. R.	Copper Range Company	Lake
T	American Smelting & Refining Co. (Tacoma, Wash.)	Electrolytic	Q. M. CO.	Quincy Mining Company	Lake
B. & M.	Anaconda Copper Mining Co.	Electrolytic			
AE	Andes Copper Mining Co.	Electrolytic			
BOLIDEN	Bolidens-Gruvaktiebolag	Electrolytic			
C. C. R.	Canadian Copper Refiners Ltd. (Montreal)	Electrolytic			
C de P Peru	Cerro de Pasco Corporation	Electrolytic			
C. C. C.	Chile Copper Company	Electrolytic			
F E C	Falconbridge Nickel Mines, Ltd.	Electrolytic			
K U E	Kennecott Copper Corp.	Electrolytic			
L. M. C.	Lewin Metals Corporation	Electrolytic			
M U F	Mufulira Copper Mines, Ltd.	Electrolytic			
N A	Norddeutsche Affinerie	Electrolytic			
O R C	Ontario Refining Co., Ltd.	Electrolytic			
A. L. S.	Philips Dodge Refining Corp. (For Adolph Lewisohn Selling Corp.)	Electrolytic			
L. N. S.	Phelps Dodge Refining Corp.	Electrolytic			
P • D	Phelps Dodge Corporation	Electrolytic			
N. E. C.	Raritan Copper Works	Electrolytic			
R E C	Rhokana Corporation	Electrolytic			
B O R	Rudnici Bakra i Topionice	Electrolytic			
U M K	Union Miniere du Haut Katanga	Electrolytic			
D R W	United States Metals Refining Co.	Electrolytic			
AMCO	United States Metals Refining Co.	Electrolytic			
OFHC	United States Metals Refining Co.	Electrolytic			
W E K	Zinnwerke Wilhelmsburg G.m.b.H.	Electrolytic			

*Subsidiary, The American Metal Co., Ltd.

Brand or Marks	Producer	Grade
B. C. R.	British Copper Refiners, Ltd.	Fire Refined High Conductivity
N. H. E.	Nasau Smelting & Refining Co., Inc.	Fire Refined High Conductivity
A M CO	United States Metals Refining Company	Fire Refined High Conductivity
H H C		

Brand or Marks	Producer	Grade
*** (3 Star)	Braden Copper Company	Fire Refined (other than Lake & Fire Refined)
K C M	Kennecott Copper Corporation	Lake
M T D	Messina (Transvaal) Development Co.	Fire Refined
P. D. M.	Phelps Dodge Corporation	High Conductivity
R	United States Metals Refining Company	

Official List of Approved Refiners Whose CATHODES are deliverable against Commodity Exchange, Inc., Copper Contract

American Smelting & Refining Co.	Mufulira Copper Mines, Ltd.
Anaconda Copper Mining Co.	Norddeutsche Affinerie
Andes Copper Mining Co.	Ontario Refining Co., Ltd.
Bolidens Gruvaktiebolag	Phelps Dodge Refining Corp.
Canadian Copper Refiners, Ltd.	Phelps Dodge Corporation
Cerro de Pasco Copper Corp.	Raritan Copper Works
Chile Copper Company	Rhokana Corporation
Consolidated Mining & Smelting Co.	Rudnici Bakra i Topionice
Falconbridge Nickel Mines, Ltd.	Union Miniere du Haut Katanga
Kennecott Copper Corp.	United States Metals Refining Co.
Lewin Metals Corp.	Zinnwerke Wilhelmsburg G.m.b.H.

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mixed turnings • refinery brass
irony brass • slags and residues.
Also low-grade white metal slags
containing tin and copper and
zinc or lead residues.

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REFLECTIONS

FRANKLIN SMELTING & REFINING CO.

CASTOR AVENUE EAST OF RICHMOND STREET
PHILADELPHIA 34, PA. • NEbraska 4-2231

Copper Statistics Reported by Copper Institute
Combined Totals in U. S. A. and Outside U. S. A.

(In tons of 2,000 pounds)

	Crude Production		Refined Production	Deliveries to Refined Stock		Stock Increases or Decreases		
	Primary	Secondary		Customers	End of Period	Blister	Refined	Total
1955 Total	2,613,662	133,065	2,728,309	2,744,391	221,331	+ 18,418	- 8,552	+ 11,112
1956								
Apr.	232,986	14,716	254,462	242,244	238,125	- 6,760	+ 12,298	+ 5,538
May	237,177	18,608	269,846	256,245	252,130	- 14,061	+ 12,161	- 1,900
June	238,814	11,360	251,382	236,714	266,221	+ 1,309	+ 14,091	+ 15,130
July	233,182	11,174	240,633	198,800	303,225	+ 3,723	+ 37,004	+ 40,727
Aug.	241,295	10,005	242,814	224,546	315,572	+ 8,486	+ 12,347	+ 20,833
Sept.	221,401	8,126	217,522	219,479	309,351	+ 12,005	- 6,221	+ 5,784
Oct.	255,442	13,924	263,752	234,080	333,952	+ 5,614	+ 24,001	+ 30,215
Nov.	249,360	10,204	254,377	239,181	345,181	+ 5,187	+ 11,229	+ 16,416
Dec.	236,512	13,124	250,173	237,003	354,420	- 537	+ 9,239	+ 8,702
Total	2,862,839	152,536	2,987,060	2,830,407	354,420	+ 28,415	+ 133,089	+ 161,402
1957								
Jan.	240,790	15,514	256,729	263,014	344,972	- 245	- 9,448	- 9,693
Feb.	235,679	10,577	242,952	214,796	370,128	+ 3,304	+ 25,156	+ 28,460
Mar.	244,407	11,850	264,649	263,271	369,256	- 8,392	- 872	- 9,264
Apr.	234,860	12,369	252,857	253,295	363,463	- 5,628	- 5,793	- 11,421

In U. S. A.

1955 Total	1,036,702	124,760	1,467,448	1,446,354	61,554	.....	+ 14,446	.....
1956								
Apr.	95,499	13,780	140,032	139,927	54,887	.....	+ 3,292	.....
May	101,422	17,475	145,740	142,961	56,208	.....	- 523	.....
June	98,496	12,471	136,713	131,299	60,671	.....	+ 4,463	.....
July	84,787	10,387	125,401	97,698	87,944	.....	+ 27,273	.....
Aug.	91,282	9,545	122,108	109,618	96,450	.....	+ 8,505	.....
Sept.	88,659	7,367	112,484	104,486	93,202	.....	- 3,248	.....
Oct.	95,109	12,621	136,379	113,353	106,120	.....	+ 12,918	.....
Nov.	90,573	8,940	132,970	114,524	116,516	.....	+ 10,396	.....
Dec.	92,231	12,352	129,839	99,594	120,645	.....	+ 4,129	.....
Total	1,133,134	139,584	1,580,287	1,465,899	120,645	.....	+ 50,091	.....
1957								
Jan.	94,783	14,683	139,150	119,925	118,564	.....	- 2,081	.....
Feb.	92,508	8,941	134,291	101,565	136,502	.....	+ 17,938	.....
Mar.	96,363	10,355	143,961	113,571	140,191	.....	+ 3,689	.....
Apr.	98,856	11,160	144,013	116,716	139,942	.....	- 349	.....

Outside U. S. A.*

1955 Total	1,576,960	8,305	1,260,861	1,298,037	159,777	.....	- 21,752	.....
1956								
Apr.	137,487	936	114,430	102,317	183,238	.....	+ 9,006	.....
May	135,755	1,133	124,106	113,284	195,922	.....	+ 12,684	.....
June	140,318	1,136	114,669	105,415	205,550	.....	+ 9,628	.....
July	148,395	787	115,232	101,102	215,281	.....	+ 9,731	.....
Aug.	150,013	460	120,706	114,928	219,122	.....	+ 3,841	.....
Sept.	132,742	759	105,038	114,993	216,149	.....	- 2,973	.....
Oct.	160,333	1,303	127,373	120,727	227,832	.....	+ 11,683	.....
Nov.	158,787	1,264	121,407	124,657	228,665	.....	+ 833	.....
Dec.	144,281	772	120,334	137,409	233,775	.....	+ 5,110	.....
Total	1,729,705	12,952	1,406,773	1,364,508	233,775	.....	+ 73,998	.....
1957								
Jan.	146,097	831	117,579	143,089	226,408	.....	- 7,367	.....
Feb.	143,171	1,636	108,661	113,231	233,626	.....	+ 7,218	.....
Mar.	148,044	1,495	120,688	149,700	229,065	.....	- 4,561	.....
Apr.	136,004	1,209	108,884	136,579	223,621	.....	- 5,444	.....

* Excluding Russia, Yugoslavia, Norway, Sweden, Japan and Australia.

**Electrolytic Copper
Producers' Price, Del. Valley
Monthly Average Prices
(Cents Per Pound)**

	1954	1955	1956	1957
Jan.	29.88	30.24	43.00	36.00
Feb.	29.88	33.00	44.03	33.318
Mar.	29.93	33.222	46.00	32.00
Apr.	29.98	36.00	46.00	32.00
May	30.00	36.00	46.00	....
June	30.00	36.00	46.00	....
July	30.00	36.00	41.56	....
Aug.	30.00	37.81	40.00	....
Sept.	30.00	43.00	40.00	....
Oct.	30.00	43.00	39.308	....
Nov.	30.00	43.00	36.00	....
Dec.	30.00	43.00	36.00	....
Ave.	29.27	37.522	41.992	....

**Electrolytic Copper
Custom Smelters' Price, Del. Valley
Monthly Average Prices
(Cents Per Pound)**

	1954	1955	1956	1957
Jan.	29.75	30.48	50.22	34.87
Feb.	29.75	33.00	52.07	32.273
Mar.	29.866	33.667	53.11	30.952
Apr.	29.965	36.00	48.88	31.24
May	30.00	36.00	44.221	....
June	30.00	36.00	40.00	....
July	30.00	36.00	38.14	....
Aug.	30.00	40.14	39.32	....
Sept.	30.00	50.00	39.00	....
Oct.	30.00	45.99	37.192	....
Nov.	30.00	45.84	35.96	....
Dec.	30.00	49.42	35.45	....
Aver.	29.944	39.38	42.797	....

**Lake Copper
Producers' Price Delivered
Monthly Average Prices
(Cents Per Pound)**

	1954	1955	1956	1957
Jan.	30.00	30.12	43.00	36.00
Feb.	30.00	33.00	43.783	33.182
Mar.	30.00	33.56	46.00	32.00
Apr.	30.00	36.00	46.00	32.00
May	30.00	36.00	46.00	....
June	30.00	36.00	46.00	....
July	30.00	36.00	41.68	....
Aug.	30.00	37.46	40.00	....
Sept.	30.00	43.00	40.00	....
Oct.	30.00	43.00	39.321	....
Nov.	30.00	43.00	36.00	....
Dec.	30.00	43.00	36.00	....
Aver.	30.00	37.51	41.975	....

Fabricators' Copper Statistics

(In tons of 2,000 pounds)

	Fabricators' Stocks of Refined Cop.	Unfilled Purchases of Refined by Fab. from Producers	Fabricators' Working Stocks	Unfilled Sales by Fabricators to Customers	Actual Copper Consumed by Fabricators	Excess Fabricators' Stocks Over Orders Bkd.
1951 Total	280,402	32,147	295,385	303,050	1,392,111	-285,886
1952 Total	333,455	32,652	292,157	275,312	1,389,451	-201,362
1953 Total	380,881	25,022	309,664	170,917	1,375,869	-74,678
1954 Total	.....	.....	.....	.....	1,232,090	.....
1955 Jan.	334,105	66,122	302,658	159,016	136,539	-61,447
Feb.	323,425	75,840	301,597	180,898	118,786	-83,230
Mar.	311,235	85,859	301,937	187,827	143,544	-92,670
Apr.	316,575	88,992	304,117	205,308	115,073	-103,858
May	327,343	111,715	309,219	323,279	113,485	-102,440
June	327,696	126,703	309,972	234,578	132,377	-90,151
July	312,587	165,505	301,048	286,095	75,846	-109,051
Aug.	304,097	150,854	303,089	283,653	97,688	-131,791
Sept.	334,996	133,391	314,111	270,102	113,628	-115,826
Oct.	353,469	135,075	313,048	275,255	115,453	-99,759
Nov.	373,314	139,855	313,779	283,953	122,332	-84,563
Dec.	389,974	139,094	314,145	293,264	127,006	-78,341
Total	.....	.....	.....	.....	1,412,287	.....
1956 Jan.	376,753	143,815	312,128	305,942	138,711	-97,502
Feb.	388,823	135,637	319,279	282,314	130,923	-77,133
Mar.	392,143	140,348	319,053	291,453	135,746	-78,030
Apr.	413,979	135,071	319,247	266,239	118,839	-36,436
May	435,083	131,023	318,592	249,352	122,253	-1,838
June	451,126	114,223	324,970	227,097	113,835	+ 13,282
July	465,015	109,040	334,584	220,810	81,275	+ 18,661
Aug.	457,679	115,295	338,818	221,975	117,937	+ 12,181
Sept.	445,679	114,981	338,488	204,154	115,857	+ 18,018
Oct.	440,706	112,893	336,856	198,517	119,440	+ 18,226
Nov.	435,216	110,792	335,829	178,814	119,441	+ 31,365
Dec.	437,187	117,601	336,217	183,834	99,223	+ 34,737
Total	.....	.....	.....	.....	1,416,278	.....
1957 Jan.	435,635	107,231	335,944	178,326	119,517	+ 28,596
Feb.	422,266	110,174	334,542	178,913	114,298	+ 18,985
Mar.	429,410	104,551	338,454	164,623	106,170	+ 30,884

Scrap Copper Receipts by Custom Smelters and Refineries in United States*

(In Short Tons)

	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
Jan.	10,172	17,084	15,763	6,640	4,528	6,486	9,859	11,047	14,322	17,506
Feb.	11,890	20,238	12,500	5,153	3,633	10,337	8,430	15,588	14,497	11,145
Mar.	11,954	20,678	13,538	7,902	5,243	19,991	9,738	12,188	15,91	13,934
Apr.	15,125	15,968	12,304	8,553	6,214	16,583	9,004	13,162	17,233	.....
May	16,357	14,237	8,749	8,458	8,033	10,857	8,687	15,133	20,805	.....
June	11,178	8,809	20,523	8,628	4,425	10,945	13,309	14,765	14,758	.....
July	8,370	7,782	10,040	6,642	5,188	9,063	10,260	9,988	12,632	.....
Aug.	17,081	8,246	10,452	6,113	5,003	7,137	10,100	12,197	12,510	.....
Sept.	16,001	10,980	4,903	3,561	4,667	9,042	10,641	15,037	9,518	.....
Oct.	10,854	6,401	9,459	3,336	4,602	10,063	11,662	12,897	15,770	.....
Nov.	7,625	15,347	9,237	3,179	4,724	7,815	10,879	9,865	11,369	.....
Dec.	11,826	10,533	7,178	4,538	6,208	11,476	14,876	13,180	14,613	.....
Total	147,931	156,303	142,067	71,812	62,470	129,798	127,449	154,714	173,748	.....

* As compiled by Copper Institute.

Brass and Bronze Ingot Monthly Shipments

(Net Tons)

	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
Jan.	27,841	26,998	19,456	18,874	28,415	28,315	24,423	20,661	25,201	27,736	27,736
Feb.	24,686	22,487	15,026	18,487	27,168	24,211	25,429	19,920	25,349	24,949	20,769
Mar.	17,477	24,282	14,550	22,494	31,997	23,890	28,256	23,653	29,713	28,310	21,948
Apr.	24,577	25,177	10,695	22,118	30,472	22,547	25,044	24,746	27,641	25,808	23,507
May	19,526	23,716	11,114	23,643	33,267	21,740	21,660	22,269	23,708	23,437	.....
June	16,929	24,401	9,696	25,093	33,817	21,274	20,818	22,348	23,141	18,842	.....
July	16,728	20,456	10,220	21,609	32,016	18,847	19,321	17,074	18,513	17,364	.....
Aug.	18,589	24,098	14,194	26,689	25,285	21,807	20,156	21,684	27,018	23,812	.....
Sept.	19,025	23,641	16,208	28,811	22,285	22,770	21,463	22,464	26,349	20,929	.....
Oct.	22,806	21,559	18,026	32,240	23,124	25,811	22,280	24,080	25,228	23,045	.....
Nov.	21,666	21,731	18,484	31,748	23,544	23,441	21,860	23,061	25,102	21,818	.....
Dec.	23,862	20,954	17,969	28,575	20,987	22,983	20,541	21,274	21,448	18,046	.....
Total	263,711	279,500	175,643	303,563	332,378	277,736	271,251	263,233	298,406	274,096	.....
Aver.	21,976	23,292	14,637	25,297	27,615	23,145	22,604	21,936	24,867	22,841	.....

METALS, MAY, 1957

Mine Production of Copper in United States

(U. S. Bureau of Mines)

(In short tons)

	Easter	Missouri	Western	Total
1953 Ttl.	38,900	2,374	885,174	926,448
1954 Ttl.	40,302	1,925	793,241	835,472
1955 Oct.	6,552	195	85,445	92,192
Nov.	6,188	184	84,681	91,053
Dec.	6,758	179	81,638	88,575
Ttl.	68,622	2,140	921,838	992,600
1956 Jan.	6,674	163	88,277	95,114
Feb.	6,688	164	82,519	89,371
Mar.	7,347	198	90,599	98,104
Apr.	6,821	195	88,592	95,608
May	6,960	191	92,531	99,682
June	6,720	173	88,049	94,942
July	6,132	185	74,283	80,600
Aug.	6,638	219	85,224	92,067
Sept.	6,195	163	78,934	85,292
Oct.	6,405	183	87,102	93,690
Nov.	6,498	150	81,984	88,632
Dec.	6,603	150	80,452	87,205
Ttl.	79,681	2,130	1,018,496	1,100,307
1957 Jan.	6,607	172	86,431	93,216
Feb.	6,082	155	83,430	89,667

Average Custom Smelters' Scrap Buying Prices

(Cents per pound for carload lots del. consumers' works)

No. 1 Copper Scrap	No. 2 Copper Scrap	Light Copper Scrap	Refinery Brass*
1955 Av. .37.035	35.535	33.59	32.70
1956 Av. .43.35	41.85	39.35	38.65
Mar. .45.77	44.27	41.77	41.02
Apr. .41.65	40.15	37.65	38.15
May .36.06	34.56	32.06	32.50
June .33.32	31.82	29.32	29.03
July .32.69	31.19	28.69	28.98
Aug. .34.269	32.769	30.269	30.75
Sept. .33.56	32.06	29.81	29.92
Oct. .30.964	29.464	27.214	27.44
Nov. .30.51	29.01	26.76	27.50
Dec. .30.423	28.923	26.673	27.42
Av. .36.25	34.75	32.33	32.47
Jan. .29.30	27.80	25.55	26.30
Feb. .26.47	24.97	22.72	23.75
Mar. .26.58	25.08	22.83	24.52
Apr. .26.895	25.395	23.145	24.695

* Of dry content for material having a dry copper content in excess of 60%.

Brass Ingot Makers' Scrap Copper Buying Prices

(Average Prices)

No. 1 Copper Scrap	No. 2 Copper Scrap	No. 1 Composition	Heavy Yellow Brass
1955 Av. .36.63	35.02	29.905	22.35
1956 Feb. .43.35	41.85	34.72	24.79
Mar. .45.77	44.27	36.46	27.76
Apr. .41.65	40.15	34.40	24.49
May .36.06	34.56	29.58	19.89
June .33.32	31.82	26.37	18.40
July .32.69	31.19	26.89	18.43
Aug. .34.269	32.769	29.833	20.463
Sept. .33.26	32.25	30.07	20.92
Oct. .30.687	29.187	28.058	19.538
Nov. .30.39	28.89	26.69	18.91
Dec. .30.195	28.695	27.50	18.96
Av. .36.17	34.67	30.483	21.34
Jan. .29.27	27.77	26.59	18.55
Feb. .26.47	24.97	23.50	16.65
Mar. .26.58	25.08	22.83	17.40
Apr. .26.895	25.395	23.50	17.50

United States Lead Statistics of Primary Refineries

(American Bureau of Metal Statistics)
(In tons of 2,000 lbs.)

	Stock At Beginning	Production: Primary & Secondary	Total Supply	Stock At End	Domestic Shipments
1953	43,560	533,583	577,443	81,152	488,437
1954	81,152	551,618	632,770	92,719	475,551
1955					
June	50,947	48,150	99,097	44,665	44,985
July	44,665	23,850	68,515	39,856	26,547
August	39,856	36,912	76,768	34,111	41,469
September	34,111	50,453	84,564	30,753	46,250
October	30,753	53,747	84,500	29,913	52,062
November	29,913	52,623	82,536	28,855	51,370
December	28,855	50,448	79,303	31,089	48,171
Total	...	547,153	639,872	...	531,339
1956					
January	31,089	51,306	82,395	32,469	49,746
February	32,469	49,475	81,944	41,450	39,411
March	41,450	54,174	95,624	52,089	39,344
April	53,089	52,976	105,065	53,958	44,986
May	53,958	47,961	101,919	50,460	40,703
June	50,460	47,367	97,827	45,951	41,458
July	45,951	48,479	94,430	49,134	36,483
August	49,134	48,404	97,538	39,304	48,404
September	39,304	53,530	92,834	40,542	47,519
October	40,542	54,815	95,357	42,314	45,254
November	42,314	50,744	93,058	37,192	47,349
December	37,192	54,063	91,254	41,181	44,191
Total	...	613,293	644,382	...	529,484
1957					
January	41,181	50,854	92,035	42,905	40,549
February	42,905	48,102	90,917	48,699	37,517
March	48,699	52,357	101,056	46,184	38,225

In instances where the figures are not in balance it is due to shipments to other than domestic consumers.

Industrial Classification of Domestic Lead Shipments

(American Bureau of Metal Statistics) (In tons of 2,000 lbs.)

	Cable	Amm.	Foil	Batty	Brass Making	Sun-dries	Jobbers	Unclassified
1951	70,149	32,099	2,088	75,837	5,583	48,248	3,550	259,155
1952	74,616	30,809	1,374	77,238	5,160	50,943	5,671	246,283
1953	76,283	34,415	2,136	80,389	5,716	55,936	6,390	227,222
1954								
Oct.	6,142	1,970	657	4,172	383	4,581	829	17,573
Nov.	5,816	3,795	333	3,898	520	3,202	721	16,628
Dec.	7,707	1,880	100	5,790	141	3,530	906	16,963
Total	75,412	30,246	2,811	66,088	5,192	57,369	9,170	229,264
1955								
Jan.	7,044	1,570	36	5,158	213	4,451	857	21,122
Feb.	5,869	3,200	348	6,758	289	4,796	1,013	24,373
Mar.	6,538	2,340	614	6,897	240	3,807	1,167	20,778
Apr.	5,909	2,625	201	6,533	463	5,178	1,234	22,735
May	6,145	2,950	251	8,127	321	4,435	1,145	22,756
June	6,623	950	50	6,833	290	5,175	1,293	23,816
July	2,313	150	307	4,365	100	3,763	946	14,603
Aug.	5,772	2,800	210	4,794	290	3,741	1,230	22,632
Sept.	6,552	2,295	415	7,794	354	4,711	1,149	22,980
Oct.	6,772	3,026	85	9,819	564	4,899	1,287	25,610
Nov.	6,606	2,433	70	13,875	387	3,795	874	23,330
Dec.	6,275	3,260	35	7,508	449	4,289	839	25,516
Total	72,418	27,599	2,622	88,461	3,960	52,994	13,034	270,251
1956								
Jan.	7,777	3,075	200	6,555	290	8,538	917	22,394
Feb.	5,974	2,435	384	5,983	275	3,592	871	19,897
Mar.	6,786	1,300	101	4,903	321	3,915	1,331	20,687
Apr.	6,744	2,950	310	4,839	260	3,522	1,376	24,985
May	6,490	2,825	...	5,027	181	3,513	964	21,753
June	8,502	2,150	...	4,167	186	3,645	1,021	21,787
July	3,497	904	...	5,007	80	2,859	1,453	22,683
Aug.	7,712	1,497	85	6,334	713	4,443	1,262	26,358
Sept.	6,354	1,850	135	6,303	230	5,038	1,339	26,270
Oct.	7,988	1,715	135	7,108	286	4,955	1,493	21,574
Nov.	6,096	2,351	...	8,556	226	5,573	792	23,755
Dec.	6,440	1,449	85	5,832	160	7,258	394	22,573
Total	80,360	24,501	1,435	70,614	3,158	56,851	13,213	274,716
1957								
Jan.	5,297	2,800	200	6,886	671	4,002	1,191	19,502
Feb.	5,103	1,450	350	6,549	508	4,820	625	18,112
Mar.	5,956	752	...	6,479	686	4,614	1,064	18,674

Lead Prices at New York

(Common Grade)

Monthly Average Prices

(Cents per pound)

	1954	1955	1956	1957
Jan.	13.26	15.00	16.16	16.00
Feb.	12.82	15.00	16.00	16.00
Mar.	12.94	15.00	16.00	16.00
Apr.	13.91	15.00	16.00	16.00
May	14.00	15.00	16.00	...
June	14.11	15.00	16.00	...
July	14.00	15.00	16.00	...
Aug.	14.06	15.00	16.00	...
Sept.	14.60	15.12	16.00	...
Oct.	14.975	15.50	16.00	...
Nov.	15.00	15.50	16.00	...
Dec.	15.00	15.56	16.00	...
Av.	14.06	15.14	16.013	...

Lead Sheet Prices

(To Jobbers, Full Sheets)

Monthly Average Prices

(Cents per pound)

	1954	1955	1956	1957
Jan.	18.26	20.00	21.66	21.50
Feb.	17.82	20.00	21.50	21.50
Mar.	17.94	20.00	21.50	21.50
Apr.	18.91	20.00	21.50	21.50
May	19.00	20.00	21.50	...
June	19.11	20.00	21.50	...
July	19.00	20.00	21.50	...
Aug.	19.06	20.00	21.50	...
Sept.	19.60	20.12	21.50	...
Oct.	19.975	20.50	21.50	...
Nov.	20.00	20.50	21.50	...
Dec.	20.00	20.56	21.50	...

Battery Shipments

The following table shows replacement battery shipments in the United States as compiled by the Business Information Division of Dun & Bradstreet, Inc., for the Association of American Battery Manufacturers:

(In thousands of units)

	1954	1955	1956	1957
Jan.	1,836	1,518	2,058	2,638
Feb.	1,461	1,691	1,340	1,960
Mar.	1,226	1,356	1,348	1,265
Apr.	1,180	1,315	1,368	...
May	1,429	1,614	1,761	...
June	1,883	1,842	1,807	...
July	2,350	2,078	2,178	...
Aug.	2,548	2,852	2,571	...
Sept.	2,800	3,120	2,711	...
Oct.	2,739	3,120	3,015	...
Nov.	2,475	2,697	2,592	...
Dec.	1,844	2,625	2,265	...
Total	23,771	25,828	25,014	...

Lead Stocks at Primary U. S. Smelters and Refiners

(American Bureau of Metal Statistics)
(In tons of 2,000 lbs.)

	In ore and matte and in process at smelters	— In base bullion (lead content) —					Total Stocks
		At smelters & refineries	In transit to refineries	In process at refineries	Refined pig lead	Antimonial lead	
1955							
Mar. 1	64,492	17,741	3,781	28,467	52,734	12,204	179,419
Apr. 1	57,577	20,063	2,309	28,564	47,496	12,385	168,394
May 1	59,686	17,468	3,496	25,373	43,207	11,749	160,979
June 1	59,632	17,705	1,941	27,979	39,892	11,055	158,204
July 1	58,182	14,707	2,941	30,579	34,432	10,233	151,074
Aug. 1	65,476	10,065	1,303	26,792	30,077	9,779	143,492
Sept. 1	75,057	17,183	3,744	29,660	26,859	7,252	159,755
Oct. 1	70,628	19,083	4,217	28,424	23,292	7,461	153,105
Nov. 1	71,257	20,682	4,276	28,596	21,828	8,085	154,724
Dec. 1	64,109	20,232	4,377	27,486	19,592	9,263	145,059
1956							
Jan. 1	71,812	16,532	3,764	27,625	21,196	9,893	150,822
Feb. 1	70,690	19,082	1,764	25,632	24,080	8,389	149,637
Mar. 1	71,023	16,406	2,588	27,519	32,355	9,095	158,981
Apr. 1	72,358	15,655	2,152	28,065	41,800	10,289	170,319
May 1	74,837	15,500	2,718	24,181	43,268	10,690	171,194
June 1	78,987	15,477	2,475	26,682	39,558	10,902	174,081
July 1	81,796	15,837	4,423	28,505	36,499	9,452	176,512
Aug. 1	76,985	16,856	3,516	29,603	38,210	10,924	176,094
Sept. 1	81,634	18,529	2,874	29,991	29,230	10,074	172,332
Oct. 1	77,787	15,991	4,413	28,083	29,361	11,181	166,816
Nov. 1	78,253	12,022	3,083	25,783	30,932	11,382	161,485
Dec. 1	82,197	9,095	4,132	25,627	25,360	11,832	158,243
1957							
Jan. 1	77,918	12,222	2,846	25,092	29,435	11,746	159,249
Feb. 1	80,451	10,636	4,061	25,827	32,418	10,487	163,880
Mar. 1	81,274	11,880	4,394	25,728	38,479	10,220	171,975
Apr. 1	82,461	14,598	3,593	25,401	36,390	9,794	172,237

Receipts of Lead in Ore and Scrap By U. S. Smelters (a)

(American Bureau of Metal Statistics) (In tons of 2,000 lbs.)

	Receipts of lead in ore			Receipts of lead in scrap etc. (b)	Total receipts in ore, & scrap
	United States	Foreign	Total		
1952 Total	405,990	98,276	504,266	41,845	546,111
1953 Total	351,183	155,788	506,971	42,994	549,965
1954 Total	336,291	158,081	494,372	49,864	544,236
1955					
March	30,056	11,104	41,160	3,291	44,451
April	28,707	16,347	45,054	3,249	48,303
May	28,511	13,377	41,888	4,879	48,767
June	28,273	14,667	42,940	4,509	47,449
July	23,027	3,826	26,853	649	27,502
August	30,249	11,859	42,108	3,942	46,050
September	29,377	14,881	44,258	3,623	47,881
October	30,073	20,845	50,918	5,655	56,573
November	27,736	13,022	40,758	3,802	44,560
December	29,363	24,136	53,499	3,150	56,649
Total	341,595	172,966	514,561	42,996	557,557
1956					
January	27,184	15,704	42,888	6,346	49,234
February	28,569	16,528	45,097	4,577	49,674
March	31,568	17,904	49,472	3,989	53,461
April	31,786	15,224	47,010	4,252	51,262
May	32,715	18,476	51,191	4,711	55,902
June	31,546	16,251	47,797	4,541	52,338
July	29,964	13,476	43,440	3,207	46,647
August	31,112	20,726	51,838	5,885	57,723
September	28,731	16,276	45,007	3,351	48,358
October	33,614	12,350	45,964	5,439	51,403
November	30,553	14,308	44,861	5,141	50,002
December	31,154	15,095	46,252	4,536	50,788
Total	368,499	192,318	560,817	55,925	616,792
1957					
January	30,632	19,961	50,593	4,471	55,064
February	31,410	15,059	46,469	4,564	51,033
March	33,445	18,813	52,258	3,058	55,316

(a) Receipts of lead in ore are computed on the basis of recoverable lead. Owing to the estimational factor in this, which is probably on the low side, and also to the possibility that some lead receipts may escape attention, these monthly totals probably understate the actual production of pig lead. (b) Includes only of scrap smelted in connection with ore, plus some scrap received by primary refiners.

N. Y. Lead Price Changes (Effective Date)

1949	Jan. 12	14.00
Nov. 16	Feb. 2	13.50
Nov. 21	Mar. 4	13.90
1950	Mar. 10	13.50
Mar. 9	Apr. 7	13.00
Mar. 14	Apr. 16	12.50
Apr. 20	Apr. 21	12.00
Apr. 26	Apr. 29	12.50
May 4	May 18	12.75
May 10	May 19	13.00
May 11	May 26	13.15
June 23	June 11	13.50
1951	July 20	13.75
June 28	July 23	14.00
July 12	Sept. 16	13.50
July 13	1954	
Aug. 15	Jan. 18	13.00
Aug. 21	Feb. 18	12.50
Sept. 1	Mar. 9	12.75
Sept. 8	Mar. 10	13.00
Oct. 2	Oct. 26	13.25
Oct. 31	Mar. 29	13.50
1952	Apr. 1	13.75
Apr. 29	Apr. 12	14.00
May 2	June 2	14.25
May 12	June 15	14.00
June 23	Aug. 25	14.25
June 24	Sept. 7	14.50
Oct. 7	Sept. 15	14.75
Oct. 14	Oct. 4	14.875
Oct. 22	Oct. 5	15.00
Nov. 3	1955	
Nov. 10	Oct. 23	15.00
Nov. 11	15.50	
Nov. 20	Oct. 26	15.50
Nov. 24	Dec. 29	16.00
Dec. 22	1956	
Dec. 29	Jan. 4	16.50
Dec. 31	Jan. 13	16.00
1953	1957	
Jan. 7	May 9	15.50
	May 16	15.00

**OPS Ceiling.

Antimonial Lead Stocks at Primary Refineries (A.B.M.S.)

	(In tons of 2,000 lbs.)				
	End of:	1954	1955	1956	1957
Jan.	14,691	14,902	8,389	10,487	
Feb.	14,798	12,204	9,095	10,220	
Mar.	11,985	12,385	10,289	9,794	
Apr.	11,977	11,740	10,690	10,113	
May	11,882	11,055	10,902	10,487	
June	9,798	10,233	9,452	9,798	
July	12,210	9,779	10,924	10,744	
Aug.	12,279	7,252	10,074	10,074	
Sept.	14,168	7,461	11,181	11,181	
Oct.	14,846	8,085	11,382	11,382	
Nov.	14,573	9,263	11,832	11,832	
Dec.	14,789	9,893	11,746	11,746	
Total	59,875	64,037	66,180	66,180	

Antimonial Lead Production by Primary Refineries (A.B.M.S.)

	(In tons of 2,000 lbs.)				
	End of:	1954	1955	1956	1957
Jan.	3,768	4,529	5,045	5,113	
Feb.	4,257	4,777	5,888	5,468	
Mar.	4,475	6,202	5,526	5,091	
Apr.	4,470	5,343	5,818	5,818	
May	4,373	4,737	5,405	5,405	
June	3,796	4,792	4,456	4,456	
July	5,991	1,153	3,853	3,853	
Aug.	6,455	2,946	5,343	5,343	
Sept.	5,869	6,650	6,709	6,709	
Oct.	5,532	8,016	5,378	5,378	
Nov.	5,364	7,985	6,993	6,993	
Dec.	5,255	6,907	5,766	5,766	
Total	59,875	64,037	66,180	66,180	

U. S. Lead Consumption

	(Bureau of Mines—In Short Tons)		
	Prelim. annual totals	1956	1957
	Jan.	Feb.	
Metal Products:			
Ammunition	44,238	3,022	3,134
Bearing metals	27,828	2,425	2,028
Brass and bronze	26,351	2,659	1,827
Cable covering	133,924	10,761	10,438
Calking lead	60,487	5,334	3,890
Casting metals	11,304	986	818
Collapsible tubes	10,155	831	615
Foil	4,552	343	279
Pipes, traps and bends	26,777	1,964	1,850
Sheet lead	29,674	2,215	2,303
Solder	72,015	6,435	6,243
Storage battery grids, posts, etc.	185,171	16,528	16,499
Storage battery oxides	180,960	17,637	16,306
Tin metal	1,719	136	78
Type metal	23,576	2,133	2,079
Total	838,731	73,409	68,387
Pigments:			
White lead	16,951	992	1,086
Red lead and litharge	78,905	6,453	7,075
Pigment colors	13,866	1,179	872
Other*	5,503	663	301
Total	115,225	9,287	9,334
Chemicals:			
Tetraethyl lead	191,990	14,793	13,135
Misc. chemicals	2,722	384	392
Total	194,712	15,177	13,527
Miscellaneous uses:			
Annealing	4,744	410	376
Galvanizing	1,512	128	138
Lead plating	693	34	27
Weights and ballast	6,040	446	359
Total	12,989	1,018	900
Other uses			
Unclassified	16,316	1,546	1,261
Total reported	†1,177,973	†100,437	†93,409
Estimated unreported consumption	12,000	1,000	1,000
Grand total	†1,190,000	†101,400	†94,400
Daily average	3,251	3,271	3,371
* Includes lead content of leaded zinc oxide production.			
† Includes lead content of scrap used directly in fabricated products.			
‡ Based on number of days in month without adjustment for Sundays or holidays.			

Consumers' Lead Stocks, Receipts and Consumption

(Bureau of Mines — In Short Tons)

	Stocks Jan. 31, 1957	Net Receipts In Feb.	Consumed In Feb.	Stocks Feb. 28, 1957
Soft lead	70,135	56,381	57,472	69,044
Antimonial lead	38,795	27,274	26,810	39,259
Lead in alloys	7,343	4,289	4,331	7,301
Lead in copper-base scrap	1,851	1,462	1,363	1,950
Total	118,124	89,406	*89,976	117,554

* Excludes 3,149 tons of lead which went directly from scrap to fabricated products and 284 tons of lead contained in leaded zinc oxide production.

Consumption of Lead by Class of Product

(Bureau of Mines — In Short Tons)

FEBRUARY

	Soft lead	Antimonial lead	Lead in alloys	Lead in Copper-base scrap	Total
Metal products	33,189	26,399	4,320	1,363	65,271
Pigments	9,038	12	...	...	9,050
Chemicals	13,526	1	...	...	13,527
Miscellaneous	641	255	4	...	900
Unclassified	1,078	143	7	...	1,228
Total	57,472	26,810	4,331	1,363	*89,976

* Excludes 3,149 tons of lead which went directly from scrap to fabricated products and 284 tons of lead contained in leaded zinc oxide production.

U. K. Lead Consumption

(British Bureau of Non-Ferrous Metal Statistics)

	(In tons of 2,240 pounds)		
	1955	1956	1957
Jan.	29,062	31,012	29,657
Feb.	28,926	30,125	29,219
Mar.	33,225	30,099	29,441
Apr.	28,656	28,186	...
May	31,092	29,752	...
June	32,627	31,501	...
July	26,994	26,963	...
Aug.	26,954	25,077	...
Sept.	34,291	30,274	...
Oct.	34,121	32,057	...
Nov.	34,820	32,036	...
Dec.	29,689	25,963	...

Lead Imports and Exports

By Principal Countries

(A. B. M. S.)

Reported in pigs, bars, etc.; metric tons except where otherwise noted.

	IMPORTS		
	Dec. 1956	Jan. 1957	Feb. 1957
U. S.† (s.t.)	40,630	31,410	22,423
Canada (s.t.)	51	51	...
Denmark	884	1,288	454
France	3,530	4,760	4,544
Germany, W.‡	3,479	...	...
Italy‡‡	1,578	...	...
Netherlands	3,269	3,932	...
Norway	256	669	...
Sweden	1,070	1,272	...
Switzerland	2,168	1,539	1,313
U. K. (l.t.)	19,865	16,257	10,062
India* (l.t.)	1,720	...	...

EXPORTS

	U. S.† (s.t.)	155	314	1,420
	Canada (s.t.)	2,733	8,946	6,632
	Denmark	199	119	174
	France	142	81	20
	Germany, W.‡	3,816	...	...
	Italy‡‡	3	...	...
	Netherlands	363	340	...
	Switzerland	2	...	...
	Northern	...	...	...
	Rhodesia* (l.t.)	806	1,072	...
	Australia* (l.t.)	13,836	...	...

† Refined.

‡ Includes scrap.

‡‡ Includes lead alloys.

* British Bureau of Non-Ferrous Metal Statistics.

American Antimony

	Monthly Average Prices In bulk, f.o.b. Laredo (Cents per lb. in ton lots)			
	1954	1955	1956	1957
Jan.	28.50	28.50	33.00	33.00
Feb.	28.50	28.50	33.00	33.00
Mar.	28.50	28.50	33.00	33.00
Apr.	28.50	28.50	33.00	33.00
May	28.50	28.50	33.00	...
June	28.50	28.50	33.00	...
July	28.50	28.50	33.00	...
Aug.	28.50	30.66	33.00	...
Sept.	28.50	33.00	33.00	...
Oct.	28.50	33.00	33.00	...
Nov.	28.50	33.00	33.00	...
Dec.	28.50	33.00	33.00	...
Aver.	28.50	30.18	33.00	...

French Lead Imports

(A. B. M. S.)

(In metric tons)

	1957		
	Jan.	Feb.	Mar.
Ore (gross weight)	7,533	8,447	7,973
Algeria	...	...	632
Morocco	6,533	6,447	6,318
Fr. Eq. Africa	1,000	...	1,000
Tunisia	...	...	1
Madagascar	...	...	22
Pig lead	4,760	4,544	3,267
Belgium	410	128	581
Germany (W.)	660	315	575
Netherlands	100	...	...
U. Kingdom	...	...	254
Algeria	3	2	...
Morocco	1,929	2,328	715
Tunisia	1,658	1,771	1,142
Antimonial lead	12	12	574

U. K. Lead Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

	1957		
	Jan.	Feb.	Mar.
(Gross Weight)	...	...	...
Lead and lead alloys	16,257	10,062	10,931
Australia	8,861	6,873	6,984
Canada	4,980	1,825	2,526
Belgium	900	100	750
Yugoslavia	250	600	370
Peru	651	650	50
Other countries	615	14	251

METALS, MAY, 1957

Domestic Zinc Statistics

American Zinc Institute

Commencing with January, 1948, all regularly operating U. S. primary and secondary smelters are included in this report. Production from foreign ores also is included.

(Tons of 2,000 lbs.)

	Stock Beginning	Production	Domes- tic	Export & Gov't	Shipments	Stock at End	Unfilled Orders at End	Daily Avg. Prod.
1950	Tl. 94,221	10,354	849,246	18,189	128,256	995,691	8,884	2,494
1950 Mo. Avg.	75,863	70,770	1,516	10,068	82,974	918,816	74,795	2,553
1951 Tl. 8,884	931,833	836,800	32,067	39,949	21,901	50,509	2,494	2,494
1951 Mo. Avg.	77,653	69,733	3,506	3,329	76,568	918,816	74,795	2,553
1952 Tl. 21,901	961,430	803,343	56,202	36,626	86,171	87,160	45,264	2,627
1952 Mo. Avg.	80,119	66,945	4,683	3,052	74,681	87,160	45,264	2,627
1953 Tl. 180,843	971,191	818,850	16,326	42,322	87,503	180,843	35,466	2,661
1953 Mo. Avg.	80,933	68,238	1,361	3,528	73,126	180,843	35,466	2,661
1954 Total	124,277	868,242	27,922	27,929	108,957	924,808	124,077	45,862
Monthly Avg.	72,353	65,660	2,327	8,080	77,067	....	....	2,379
1955 Feb.	117,152	78,977	80,016	3,743	16,205	99,964	96,165	54,527
Mar.	96,165	89,179	79,720	1,828	12,059	94,507	90,837	60,057
Apr.	90,837	83,786	89,589	1,967	8,488	100,044	74,597	2,877
May	74,579	86,177	83,336	3,802	10,484	97,572	63,184	65,127
June	63,184	84,458	92,212	1,492	5,335	99,039	48,603	57,231
July	45,603	84,400	76,812	862	4,039	81,713	51,290	46,056
Aug.	51,290	84,874	87,042	885	2,163	90,080	46,084	73,632
Sept.	46,084	83,448	83,664	1,274	2,427	87,365	42,167	52,278
Oct.	42,167	89,449	85,770	36	1,942	87,748	43,868	61,746
Nov.	43,858	86,616	91,585	280	1,561	93,426	35,058	64,560
Dec.	38,058	92,578	87,010	684	1,963	89,657	40,979	72,908
Total	40,979	1,031,018	1,007,619	19,495	87,200	1,114,316	40,979	2,904
Monthly Avg.	85,918	83,968	1,625	7,267	92,860	....	....	2,825
1956 Jan.	40,879	90,313	87,723	1,084	1,155	89,962	41,830	60,717
Feb.	41,320	86,329	84,727	317	2,782	87,826	39,832	45,255
Mar.	39,833	91,690	84,204	460	6,821	91,485	40,038	53,070
Apr.	40,038	88,664	74,789	1,437	4,570	10,795	47,907	46,106
May	47,807	81,288	69,085	287	10,196	69,565	59,577	84,008
June	59,877	78,821	63,048	539	18,045	68,672	69,824	65,921
July	69,226	83,080	84,219	811	14,501	49,531	102,775	55,559
Aug.	102,775	89,549	70,707	1,235	16,075	88,017	104,307	55,769
Sept.	104,807	90,235	73,142	934	18,301	92,377	102,165	64,450
Oct.	102,165	93,492	84,991	465	21,392	106,848	88,810	58,425
Nov.	88,810	91,808	82,478	787	27,168	110,433	70,185	45,866
Dec.	70,185	98,234	80,772	671	18,354	99,779	68,622	34,913
Total	1,062,954	869,270	9,027	157,014	1,035,311	....	....	3,169
Monthly Avg.	88,850	72,439	752	13,065	86,275	....	....	2,904
1957 Jan.	68,622	93,452	67,273	450	15,377	83,100	78,974	42,922
Feb.	78,974	88,078	67,441	1,527	10,905	80,163	86,889	56,421
Mar.	87,040	96,924	67,097	1,558	25,638	94,667	89,357	56,818
Apr.	89,357	96,506	55,182	1,411	23,671	80,264	105,599	42,162

U. S. Consumption of Slab Zinc

	Bureau of Mines					Total
	Galvanizers	Die Casters	Brass products	Rolled zinc	Zinc oxide & other	
1949 Total	348,544	197,387	84,257	55,100	17,643	702,931
1950 Total	434,094	281,385	136,451	67,779	27,656	947,365
1951 Total	386,373	266,442	141,456	64,000	28,738	887,009
1952 Total	375,563	236,022	155,311	51,508	30,885	849,289
1953 Total	403,162	305,346	177,301	53,784	38,037	977,636
1954 Total	398,599	286,817	107,293	45,979	33,342	876,130
1955 February	31,601	31,254	10,690	3,912	2,745	80,202
March	37,648	37,682	12,718	4,635	3,305	95,988
April	36,136	36,628	11,034	3,833	3,181	90,812
May	37,471	36,926	12,404	4,203	3,409	94,413
June	37,874	32,821	13,305	5,012	3,227	92,239
July	33,433	23,910	7,017	2,832	2,897	70,589
August	38,317	30,168	10,244	5,431	3,027	87,687
September	39,181	31,804	12,672	4,185	3,507	91,849
October	40,030	35,136	13,961	4,714	3,596	97,940
November	38,116	38,616	13,455	3,952	3,636	98,275
December	37,249	36,982	15,003	3,900	3,621	96,755
Total	439,694	404,790	144,816	50,363	39,302	1,081,468
1956 January	38,148	36,554	13,097	4,442	3,665	95,906
February	37,702	31,274	12,678	3,883	3,325	88,862
March	38,662	31,332	12,889	4,433	3,566	90,882
April	37,092	29,226	12,635	4,010	3,359	86,322
May	38,064	26,003	12,218	3,431	1,260	80,976
June	37,005	21,790	8,351	3,454	1,315	71,915
July	12,960	21,425	5,193	3,187	2,883	45,648
August	33,840	26,814	8,420	4,222	2,959	76,255
September	37,313	26,998	8,370	3,397	3,280	79,358
October	40,875	34,985	10,164	4,158	3,695	93,877
November	36,767	32,812	9,581	3,625	3,539	87,224
December	32,790	33,238	8,799	3,140	3,405	82,272
Total	421,218	352,451	122,395	45,382	36,251	988,097
1957 January	34,337	37,517	10,800	3,502	3,434	90,490
February	31,686	32,517	9,156	3,284	3,206	80,752

Prime Western Zinc Prices

	(Cents per pound)			
	(In tons of 2,240 pounds)			
	1954	1955	1956	1957
Jan.	9.76	11.50	13.46	13.50
Feb.	9.375	11.50	13.50	13.50
Mar.	9.66	11.50	13.50	13.50
Apr.	10.25	11.93	13.50	13.50
May	10.29	12.00	13.50	....
June	10.96	12.25	13.50	....
July	11.00	12.50	13.50	....
Aug.	11.00	12.50	13.50	....
Sept.	11.44	12.96	13.50	....
Oct.	11.50	13.02	13.50	....
Nov.	11.50	13.00	13.50	....
Dec.	11.50	13.00	13.50	....
Av.	10.69	12.305	13.497	....

High Grade Zinc Prices

	(Delivered)			
	N. Y. Monthly Averages			
	(Cents per pound)			
	1954	1955	1956	1957
Jan.	11.11	12.85	14.81	14.85
Feb.	10.725	12.85	14.85	14.85
Mar.	11.01	12.85	14.85	14.85
Apr.	11.60	13.28	14.85	14.85
May	11.64	13.35	14.85	....
June	12.31	13.60	14.85	....
July	12.35	13.85	14.85	....
Aug.	12.35	13.85	14.85	....
Sept.	12.79	14.31	14.85	....
Oct.	12.85	14.37	14.85	....
Nov.	12.85	14.35	14.85	....
Dec.	12.85	14.35	14.85	....
Av.	12.04	13.655	14.847	....

U. K. Zinc Consumption

	British Bureau of Non-Ferrous Metal Statistics			
	(In Tons of 2,240 Pounds)			
	1955	1956	1957	
Jan.	29,192	29,779	28,485	
Feb.	28,814	29,568	26,276	
Mar.	33,451	28,650	27,049	
Apr.	27,741	25,348	....
May	29,237	27,922	....
June	31,467	26,650	....
July	23,695	23,826	....
Aug.	23,261	18,867	....
Sept.	30,080	25,470	....
Oct.	29,460	27,784	....
Nov.	31,516	27,713	....
Dec.	28,683	24,134	....
Total	346,597	315,711	....

Mine Production of Zinc Mine Production of Lead Mine Production of Gold

in United States in United States in United States

(U. S. Bureau of Mines)

	(In short tons)					(In short tons)					(In fine ounces)			
	Eastern States	Central States	Western States	Total U.S.*	1952	Eastern States	Central States	Western States	Total U.S.*	1952	Eastern States	Western States	Alaska*	Total
1952					Ttl. 1,948	1,650,660			233,428	1,886,036				
Total	185,939	94,410	385,652	666,001	1953	Ttl. 1,529	1,689,668		273,479	1,964,676				
1953					1954	Ttl. 1,731	1,577,216		252,794	1,831,741				
Total	183,612	57,300	293,818	534,730	1955	Aug. 171	119,327		40,931	160,429				
1954					1955	Sept. 170	139,811		52,153	192,134				
Total	166,487	63,100	234,942	464,539	1955	Oct. 182	140,812		43,486	184,480				
1955					1955	Nov. 168	144,837		35,530	180,535				
Nov.	12,676	5,532	21,347	39,555	1955	Dec. 166	143,827		5,000	148,993				
Dec.	12,644	5,250	21,721	39,615	1955	Ttl. 2,026	1,634,625		247,535	1,884,186				
Total	163,230	73,630	277,811	514,671	1956	Jan. 121	132,919		1,977	135,017				
1956					1956	Feb. 154	130,264		866	131,284				
Jan.	13,830	5,263	22,073	41,166	1956	Mar. 198	134,331		62	134,591				
Feb.	13,975	5,236	23,506	42,717	1956	Apr. 156	136,360		522	137,038				
Mar.	15,058	5,740	26,975	47,773	1956	May 175	141,319		4,130	145,624				
Apr.	14,172	5,098	25,618	44,888	1956	June 199	139,544		12,312	152,055				
May	14,834	5,557	26,840	47,232	1956	July 45	126,204		31,515	157,764				
June	13,730	5,228	26,135	45,093	1956	Aug. 178	136,827		45,452	182,457				
July	13,028	5,364	24,571	42,963	1956	Sept. 194	137,556		40,574	178,324				
Aug.	14,559	5,425	25,453	45,437	1956	Oct. 194	129,424		35,901	165,519				
Sept.	13,567	4,628	23,785	41,980	1957	*Alaska totals based on mint and smelter receipts.								
Oct.	17,439	4,815	26,607	48,861	1957									
Nov.	15,604	4,566	25,279	45,449	1957									
Dec.	15,513	4,160	24,411	44,084	1957									
Total	175,310	61,080	301,253	537,643	1957									
1957					1957									
Jan.	18,586	4,916	25,864	49,186	1957									
Feb.	15,989	4,658	25,200	45,847	1957									
Mar.	17,834	5,156	27,160	50,150	1957									

*Includes Alaskan output in some months.

*Includes Alaskan output in some months.

Mine Production of Recoverable Silver in United States

(U. S. Bureau of Mines)

	(In Fine Ounces)				
	Eastern States	Missouri	Western States	Alaska*	Total
1953 Total	158,707	223,500	36,354,685	39,111	36,776,003
1954 Total	142,180	283,600	36,121,368	35,140	36,582,288
1955					
August	12,360	38,100	2,723,552	5,477	2,779,489
September	11,517	37,180	2,927,151	6,954	2,982,802
October	15,152	35,540	3,145,297	6,704	3,202,693
November	12,476	36,040	2,963,360	4,735	3,016,611
December	11,831	37,556	2,849,045	750	2,899,182
Total	159,038	438,000	36,103,723	33,804	36,734,565
1956					
January	4,664	30,880	2,869,878	316	2,911,551
February	12,252	32,430	2,967,837	82	3,012,601
March	16,536	34,370	3,243,598	11	3,294,515
April	6,918	32,050	3,212,306	61	3,251,337
May	13,870	33,300	3,081,054	545	3,128,769
June	11,758	30,610	3,103,654	524	3,147,546
July	17,069	31,160	2,702,563	4,116	2,754,908
August	11,073	35,180	3,243,126	6,322	3,295,701
September	12,111	28,700	2,879,687	5,664	2,926,162
October	7,696	34,540	3,122,958	4,942	3,170,136

*Alaska totals based on mint and smelter receipts.

**Includes a total of 3,708 oz. from Illinois.

Production of Primary Aluminum in the U. S.*

	(U. S. Bureau of Mines)							
	(In short tons)							
	1950	1951	1952	1953	1954	1955	1956	1957
Jan.	50,023	67,954	76,934	89,895	116,247	128,203	140,394	147,029
Feb.	54,493	62,740	72,374	92,649	110,483	116,236	132,763	119,059
Mar.	58,747	70,022	77,069	104,460	122,339	130,272	145,895	135,733
Apr.	58,024	67,701	76,880	102,071	120,434	126,394	144,726	
May	51,929	67,720	80,803	105,464	125,138	131,128	150,800	
June	60,400	67,454	77,476	104,152	120,758	127,634	145,726	
July	63,518	72,698	78,368	109,285	126,161	132,669	151,624	
Aug.	63,006	73,816	85,175	110,545	125,296	133,551	92,406	
Sept.	54,449	69,429	76,882	109,333	120,332	130,806	132,316	
Oct.	62,915	72,647	77,312	108,219	125,089	134,655	149,125	
Nov.	62,276	72,246	74,839	105,636	121,252	133,689	145,081	
Dec.	65,897	72,454	83,419	110,291	127,056	140,748	148,391	
Total	718,622	836,881	937,330	1,252,013	1,460,565	1,565,721	1,679,427	

* Based on producers' reports to War Production Board to July, 1946. Thereafter to Bureau of Mines. The monthly figures are preliminary in nature and will not add to the totals derived from the Bureau's annual industry canvass.

Mine Production of Gold in United States

(U. S. Bureau of Mines)

	Eastern States	Western States	Alaska*	Total
1952	Ttl. 1,948	1,650,660	233,428	1,886,036
1953	Ttl. 1,529	1,689,668	273,479	1,964,676
1954	Ttl. 1,731	1,577,216	252,794	1,831,741
1955	Aug. 171	119,327	40,931	160,429
Sept. 170	139,811	52,153	192,134	
Oct. 182	140,812	43,486	184,480	
Nov. 168	144,837	35,530	180,535	
Dec. 166	143,827	5,000	148,993	
Ttl. 2,026	1,634,625	247,535	1,884,186	
1956	Jan. 121	132,919	1,977	135,017
Feb. 154	130,264	866	131,284	
Mar. 198	134,331	62	134,591	
Apr. 156	136,360	522	137,038	
May 175	141,319	4,130	145,624	
June 199	139,544	12,312	152,055	
July 45	126,204	31,515	157,764	
Aug. 178	136,827	45,452	182,457	
Sept. 194	137,556	40,574	178,324	
Oct. 194	129,424	35,901	165,519	

*Alaska totals based on mint and smelter receipts.

**Includes purchases of crude silver by the U. S. Mint.

† Includes purchases of refined bullion imported on or after August 31, 1943.

‡ The separation between silver of foreign and domestic origin on the basis of refined bars and other refined forms is only approximate.

§ The averages are based on the price of refined bullion imported on or after August 31, 1943.

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U. S. Copper Imports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

1956 — 1957 —

Dec. Jan. Feb.

Ore, matte & regulus			
(cont.)	9,962	12,452	10,131
Canada	1,834	3,038	1,383
Mexico	599	661	594
Cuba	886	2,044	1,184
Argentina	277	...	191
Bolivia	326	472	
Chile	612	1,401	1,131
Peru	1,963	1,404	1,249
Cyprus	2,289	2,344	
Philippines	1	409	3,656
Union of South Africa	1,136	1,028	
Australia	...	132	271
Other countries	39	1	...
Blister copper (cont.)	34,794	32,494	18,217
Mexico	2,860	3,383	1,519
Chile	29,954	22,133	14,466
Peru	...	1,697	
N. Rhodesia	...	3,613	
Union of South Africa	1,980	555	745
Australia	...	1,113	1,487
Refined cathodes and shapes	15,419	13,496	14,190
Canada	8,891	8,357	10,009
Chile	3,837	1,747	649
Peru	...	912	1,428
Norway	325	...	
Belgian Congo	949	949	1,700
N. Rhodesia	1,417	1,531	404
Total Imports:			
Crude and refined	60,175	58,452	42,538
In rolls, sheets or rods	643	867	717
Old and scrap (cont.)	229	142	258
Composition metal (content)	35	...	27
Brass scrap and old (cu. cont.)	271	200	292

U. S. Zinc Exports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

1956 — 1957 —

Dec. Jan. Feb.

Ore, conc. (cont.)	273	7	
Slabs, blocks, etc.	413	496	503
Mexico	55	55	...
Belgium	280	...	280
Netherlands	30	...	...
United Kingdom	...	336	196
Korea	22	30	21
Other countries	26	75	...
Total Exports:			
Ore, conc., slabs, blocks	686	503	503
Scrap: Ashes, dross and skimmings	521	424	471
Rolled in sheets, plates and strips	264	114	248
Alloys ex brass and bronze	12	17	17
Die castings	137	135	133
Battery shells and parts, unassembled	19	31	
Chromite zinc sheets, mold, castings, pattern plates, forms, n.e.s.	79	78	65

* Includes photoengraving sheets and plates.

U. S. Copper Exports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

1956 — 1957 —

Dec. Jan. Feb.

Ore, conc., matte and other unref. (cont.)	736	1,223	1,407
Refined ingots, bars, etc. [†]	39,620	29,933	29,769
Canada	124	196	193
Brazil	1,444	403	471
Belgium	5	...	...
Denmark	448	...	...
France	4,676	3,319	2,937
Germany (West)	6,191	3,224	1,646
Italy	6,300	2,235	3,282
Netherlands	1,875	588	616
Norway	442	784	
Sweden	453	...	...
Switzerland	2,321	920	811
United Kingdom	7,313	3,143	7,805
Yugoslavia	220	...	...
India	2,265	1,287	168
Japan	4,816	13,627	11,618
Union of South Africa	25	79	49
Australia	560	...	...
Other countries	142	128	173

Total Exports:

Crude and refined	40,356	31,156	31,176
Pipes and tubes	101	84	106
Plates and sheets	39	58	11
Rods	12	4	60
Brush-copper castings, rolls, segments (finished forms) n.e.s.	9	31	20
Wire, bare	1,450	890	936
Building wire & cable	366	261	227
Weatherproof wire [‡] , wire, n.e.s.	64	113	38
Insulated copper	920	1,117	783

[†] Includes exports of refined copper resulting from scrap that was reprocessed on toll for account of the shipper.

[‡] Gross weight; n.e.s. — not elsewhere specified.

U. S. Copper Scrap Exports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

1956 — 1957 —

Dec. Jan. Feb.

Copper scrap, unalloyed [†]	3,167	5,177	4,682
(new and old)	517	650	704
Canada	8	...	...
France	27	191	138
Germany (West)	176	614	1,087
Switzerland	56	14	
India	35	...	...
Japan	2,447	3,558	2,675
Other countries	65	64	
Copper-base scrap, alloyed [†] (new and old)	6,386	7,947	6,523
Canada	2	4	
Belgium	33	110	
Germany (West)	2,343	1,567	1,404
Italy	860	982	1,260
Netherlands	53	...	...
Spain	202	155	...
Switzerland	112	255	22
United Kingdom	293	458	253
India	186	322	305
Japan	2,309	4,110	3,017
Other countries	...	37	
France	28	63	111

[†] Ash, brass mill, clippings, dross, flue dust, residues, scale, skimmings, wire scrap.

[‡] Copper-base alloys, including brass and bronze — Ashes, clippings for remanufacture, cupro-nickel scrap, cupro-nickel trimmings, nickel silver scrap, phosphor bronze, phosphor copper, skimmings, turnings, round.

U. S. Lead Imports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

1956 — 1957 —

Dec. Jan. Feb.

Ore, matte, etc. (cont.)	15,465	22,653	11,104
Canada	1,566	4,871	1,426
Mexico	565	241	327
Guatemala	722	568	1,014
Honduras	417	198	176
Bolivia	2,373	949	602
Colombia	195	1	...
Peru	6,096	2,899	3,259
U. S. Africa	3,317	5,274	...
Australia	...	7,366	4,238
Philippines	182	242	...
Other countries	32	44	65
Pigs and bars	40,630	31,410	22,423
Canada	1,739	747	3,648
Mexico	9,660	12,870	4,824
Peru	5,100	2,154	1,816
Denmark	...	168	56
Spain	28	...	772
Yugoslavia	2,590	4,852	...
Australia	24,103	12,881	6,455

TOTAL IMPORTS

Ore, base bullion, ref. ... 56,095 54,063 33,527

Lead scrap, dross, etc.	...	...	...
(cont.)	323	346	831
Antimonial lead & typemetal	692	466	416
Lead content thereof	674	414	398

U. S. Zinc Imports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

1956 — 1957 —

Dec. Jan. Feb.

Zinc ore (cont.)	45,425	42,189	41,314
Canada	17,970	9,484	10,810
Mexico	16,260	16,627	17,178
Cuba	120	217	150
Guatemala	473	682	1,063
Honduras	161	132	98
Bolivia	616	2	21
Colombia	29	1	...
Chile	264	268	682
Peru	6,616	10,079	10,770
Union of South Africa	2,518	3,080	...
Australia	...	1,201	535
Philippines	22	36	...
Other countries	376	380	7
Zinc blocks, pigs, etc.	46,452	27,493	24,287
Canada	16,120	9,720	12,287
Mexico	2,930	3,596	2,218
Peru	299	449	602
Austria	110	83	220
Belgium	9,425	4,292	3,226
Germany (West)	5,169	1,322	331
Italy	2,403	716	414
Netherlands	2,426	1,056	608
United Kingdom	560	...	...
Yugoslavia	826	...	1,157
Belgian Congo	2,271	2,574	1,003
Rhodesia	560	560	...
Australia	1,904	112	1,568
Japan	1,827	434	653
Other countries	1,008	1,193	...

Total Imports:

Zinc ore, blocks, pigs 91,877 69,682 65,601

Dross and skimmings 57 154 17

Old and worn out 31 1 0

	OPA	Av.	Av.	1957
Copper Domestic	1939	1946	May 16	
(Electro, Del. Valley)	14,20	14,375	30,00-	
Lead (N. Y.)	5.05	8.25	15.00	
P. W. Zinc (E. St. Louis, f. o. b.)	5.05	5.05	11.50	
New York, del.	...	...	12,00	
Tin, Spot Straits, N. Y.	...	...	98.00	
Aluminum Ingot 99% + 20.00	15.00	15.00	27.10	
Antimony (R.M.M. brand, f. o. b. Laredo)	12.36	14.50	33.00	

World Production of Copper
 (American Bureau of Metal Statistics)
 (In Tons of 2,000 Pounds)

	United States	Canada	Mexico (crude)	Chile	Peru	Fed. Rep. of Germany	Norway	United Kingdom	Yugo- slavia	India	Japan	Turkey	Aus- tralia	Northern Rhodesia (c)	Union of South Africa (d)
	(a)	(b)	(c)	(d)	(d)	(e)	(f)	(g-h)	(e)	(f-h)	(e)	(f)	(e)	(e)	(d)
1951	964,589	269,971	60,511	396,937	25,495	234,647	....	....	....	100,254	....	16,984	349,667	36,104	
Total	961,886	258,868	60,874	422,498	22,640	206,747	11,206	163,968	36,176	7,009	104,060	2,546	21,119	336,883	87,459
1952	957,318	253,652	63,380	371,742	25,803	233,330	13,306	108,604	34,381	5,709	100,381	25,641	37,080	382,884	88,341
1953	863,721	302,984	59,030	372,814	29,233	258,259	14,205	152,858	33,394	8,274	117,371	27,727	42,241	386,577	43,153
1954	1,036,702	326,599	61,583	447,288	35,478	286,805	14,876	138,271	31,151	8,432	124,908	26,313	41,935	350,302	47,176
1955	96,732	30,063	6,040	30,475	693	23,826	1,329	14,597	2,436	456	11,133	1,895	3,985	32,887	3,808
Jan.	89,326	26,867	4,965	37,420	2,492	21,106	1,259	11,437	1,872	792	11,029	2,477	4,331	33,545	2,924
Feb.	102,459	31,659	7,107	38,356	2,500	23,838	1,322	12,581	2,313	821	10,390	3,074	5,991	32,535	3,773
Mar.	98,578	27,804	4,436	39,731	2,474	22,593	1,402	8,154	1,660	761	9,927	2,355	5,443	30,789	3,106
Apr.	101,422	29,422	5,801	39,954	2,612	23,134	1,412	10,217	3,103	755	11,923	2,443	4,477	33,577	4,835
May	98,496	29,097	5,614	36,812	2,412	23,920	1,413	9,715	3,018	687	12,490	2,628	4,461	33,640	4,461
June	84,787	31,141	5,109	40,880	2,602	24,383	1,186	12,223	3,197	740	12,570	1,044	4,589	33,279	3,090
July	91,282	28,719	5,357	44,202	2,523	24,006	1,251	6,733	3,323	782	12,443	1,584	4,841	33,720	4,715
Aug.	88,659	31,196	5,609	41,475	....	24,022	1,510	11,281	3,028	785	12,015	2,298	4,207	26,917	4,307
Sept.	95,109	29,977	6,488	47,346	....	24,405	1,733	11,127	3,020	757	12,477	2,754	4,497	42,381	4,868
Oct.	90,573	29,837	5,871	46,407	....	22,156	1,344	11,426	2,733	702	10,648	2,717	5,252	38,800	4,170
Nov.	92,231	30,422	5,521	44,911	838	21,989	1,293	9,174	2,687	785	11,933	2,064	4,717	38,892	4,299
Dec.	96,023	....	....	....	....	2,582	....	....	....	....	....	....	....	43,471	....

(a) Reported by Copper Institute. Crude, "recoverable contents of mine production or smelter production or shipments, and customs intake". Does not include intake of scrap nor of imported ore except that received from Cuba and Philippines. (b) Blister copper plus recoverable copper in concentrates, matte, etc., exported. (c) Crude copper, i.e., copper content of blister or converter copper as originally produced in the several countries, although some of it may be refined at home; e.g., in Rhodesia. (d) Blister and/or refined. (e) Refined. There are quantities of scrap included in the electrolytic production in addition to that reported, tonnage of which is not obtainable. (f) Smelter production. (g) Refinery production from imported blister only. (h) British Bureau of Non-Ferrous Metal Statistics. *Refined.

World Production of Refined Lead

(American Bureau of Metal Statistics)
 (In Tons of 2,000 Pounds)

	United States	Canada	Mexico	Peru	Belgium	France	Fed. Rep. of Germany	Italy	Spain	Yugo- slavia	Japan	Aus- tralia (a)	French Morocco	Tunisia	Rho- desia	Total
	(a)	(b)	(c)	(d)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
1951	486,874	162,712	219,352	48,824	77,873	53,831	170,766	39,683	45,460	....	18,516	217,301	20,287	25,476	16,646	1,602,601
Total	532,778	183,889	248,551	58,636	88,139	59,607	152,751	38,504	46,060	74,053	20,882	217,298	31,224	28,264	14,112	1,783,643
1952	528,883	166,856	225,075	66,520	84,162	60,887	164,077	40,786	53,799	78,038	25,513	241,419	29,970	30,397	12,891	1,813,773
1953	551,618	166,379	231,595	63,735	79,260	71,033	162,773	41,150	62,475	73,555	37,612	260,424	29,417	30,015	16,800	1,877,841
1954	50,448	12,553	18,687	7,038	8,080	6,730	16,806	4,031	5,267	7,208	3,946	21,113	1,414	3,790	1,456	168,487
1955	51,306	12,179	17,587	7,730	8,731	7,014	16,218	3,722	5,399	6,210	3,929	24,196	4,967	2,070	1,456	168,374
Jan.	49,475	11,469	16,510	5,497	9,446	6,241	15,743	3,688	5,202	4,708	4,239	16,392	4,572	1,307	1,232	157,173
Feb.	54,174	12,438	17,376	6,142	9,883	14,562	3,164	5,319	7,187	4,009	19,535	3,505	2,500	1,680	167,740	
Mar.	52,976	11,564	15,186	6,790	8,650	6,276	14,398	3,799	6,118	7,159	4,136	17,407	2,056	2,273	1,456	161,369
Apr.	47,161	11,990	17,611	5,970	9,188	6,814	14,022	4,511	5,660	5,786	4,142	15,984	798	2,372	1,456	156,551
May	47,867	11,591	16,091	6,779	9,481	6,704	14,303	3,100	4,767	7,286	3,972	19,664	2,064	2,064	1,456	157,830
June	48,479	12,374	18,515	6,415	9,665	6,377	12,165	3,887	5,196	7,827	4,202	27,935	2,876	1,841	1,456	170,426
July	48,404	12,196	18,890	6,192	9,372	1,896	11,586	2,440	4,724	7,546	4,126	19,757	4,151	1,933	1,400	155,665
Aug.	53,530	12,706	18,567	6,378	9,213	6,071	13,671	2,833	5,962	6,182	4,614	23,654	3,630	2,970	1,344	172,788
Sept.	54,815	13,923	20,169	2,237	9,243	7,212	16,873	4,600	6,002	8,237	4,271	26,243	2,490	2,389	1,400	181,423
Oct.	50,744	12,914	17,934	9,312	7,883	17,679	3,319	5,343	7,632	4,494	23,220	2,180	2,132	165,282	....
Nov.	54,062	12,531	17,088	5,787	9,540	1,797	17,094	3,667	5,113	7,747	4,885	22,263	1,948	2,724	1,344	169,392
Dec.	50,854	10,117	19,512	5,676	....	8,084	16,540	3,196	5,389	6,195	4,928	21,498	4,052	1,261	1,344	....
Jan.	48,012	....	18,574	5,736	....	7,978	14,516	3,519	....	....	4,838	....	3,759	2,544	1,232	1,120
Feb.	52,357	17,873	6,431	....	....	....	....	....	....	....	....	....	....	....	....	....

(a) Production credited to Australia includes lead refined in England from Australian base bullion.

World Production of Slab Zinc

(American Bureau of Metal Statistics)
 (In Tons of 2,000 Pounds)

	United States	Can.	Mexico	Peru	Belgium	France	Fed. Rep. of Britain	Great Britain	Italy	Nether- lands	Norway	Spain	Yugo- slavia	Japan	Aus- tralia (a)	Rho- desia (b)	Total (d)
	(a)	(b)	(c)	(d)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
1951	931,833	218,548	57,980	1,003	220,479	82,184	155,024	78,101	52,058	24,924	44,971	23,444	....	62,109	88,103	25,301	2,065,216
Total	961,430	223,140	61,486	5,491	205,909	88,255	162,272	76,981	60,438	28,555	43,061	23,829	15,943	77,203	97,931	25,687	2,141,088
1952	971,191	247,707	59,589	9,819	213,215	89,218	163,430	81,436	65,730	27,721	42,566	24,152	16,037	86,833	101,008	28,370	2,228,017
1953	868,242	218,810	60,477	16,982	234,896	122,248	184,806	90,987	74,356	28,686	48,768	25,109	15,040	112,292	117,066	29,736	2,248,501
Total	1,031,018	257,008	61,879	18,943	233,623	123,623	197,024	90,917	77,761	31,202	49,724	26,244	15,175	122,965	113,221	31,248	2,533,879
1954	90,313	21,696	5,279	....	20,359	11,756	16,827	6,815	2,786	4,845	2,219	1,146	15,928	9,753	2,632	222,280	
Jan.	86,229	20,356	4,949	963	20,589	9,911	15,598	7,684	5,799	2,777	3,961	2,038	1,144	10,337	8,982	2,688	208,693
Feb.	91,690	22,010	5,333	1,980	20,710	9,491	16,839	9,351	6,355	2,853	4,331	2,166	1,236	11,702	9,572	2,688	224,827
Mar.	88,664	21,330	5,207	1,220	20,687	10,819	16,689	7,882	6,613	2,693	4,002	2,172	1,222	13,806	9,243	2,688	218,363
Apr.	81,238	21,790	5,248	1,225	21,300	11,174	17,212	6,719	7,190	2,662	4,168	2,226	1,289	13,401	10,012	2,688	214,194
May	78,321	20,780	5,142	1,439	21,030	11,003	16,898	8,857	6,270	2,530	4,427	2,175	1,282	12,466	8,606	2,688	208,635
June	83,080	21,691	5,198	1,285	21,015	10,679	17,964	6,617	6,433	2,637	4,688	2,047	1,325	13,089	11,141	2,800	216,209
July	89,549	21,354	5,154	1,427	20,996	10,846	17,633	6,925	6,995	2,543	4,826	1,915	1,420	12,385	10,032	2,646	221,801
Aug.	90,235	20,691	5,018	....	21,207	10,210	17,187	9,130	6,817	2,452	4,487	1,918	1,287	12,674	9,866	2,744	220,868
Sept.	93,493	21,412	5,257	....	21,153	8,871	17,428	7,334	2,718	4,743	2,110	1,244	13,497	10,171	2,800	224,159	
Oct.	91,808	20,470	5,060	....	21,044	9,257	16										

U. K. Virgin Copper Stocks

(In long tons)

British Bureau of Non-Ferrous Metal Statistics

	1955	1956	1957
At start of:	61,480	76,197	59,614
Jan.	61,480	76,197	59,614
Feb.	62,771	79,377	59,203
Mar.	70,185	71,634	62,120
Apr.	67,566	73,776	61,779
May	60,767	76,481	...
June	58,546	71,713	...
July	64,256	76,188	...
Aug.	99,628	68,197	...
Sept.	107,261	72,069	...
Oct.	93,681	62,327	...
Nov.	75,533	58,893	...
Dec.	77,749	55,838	...

U. K. Refined Lead Stocks

(British Bureau of Non-Ferrous Metal Statistics)

(In long tons)

	1955	1956	1957
At start of:	31,173	40,987	39,420
Jan.	32,274	34,326	41,433
Feb.	39,461	29,693	36,900
Mar.	37,587	33,974	34,877
April	45,226	29,479	...
June	38,760	30,537	...
July	30,816	37,088	...
Aug.	32,270	35,432	...
Sept.	48,036	35,793	...
Oct.	42,912	39,391	...
Nov.	42,061	32,662	...
Dec.	38,410	32,025	...

U. K. Stocks of Zinc

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

	Virgin Zinc	Zinc. Conc.	1956	1957	1956	1957
At start of:	49,962	44,816	54,447	53,274		
Jan.	45,239	40,501	49,537	63,366		
Feb.	44,288	38,927	48,667	59,957		
Mar.	49,194	41,260	40,502	55,698		
April	49,129	36,524	...	...
May	47,266	40,136	...	...
June	47,644	40,763	...	...
July	49,169	47,972	...	...
Aug.	51,946	57,125	...	...
Sept.	50,978	55,354	...	...
Oct.	47,364	54,376	...	...
Nov.	46,364	55,223	...	...

U. K. Copper Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

	1956	1957	Jan.	Feb.	Mar.
(Gross Weight)					
Copper and copper alloys	43,146	34,635	39,177		
U. S. Africa	50	200			
N. Rhodesia	24,786	12,048	18,418		
Canada	5,487	7,400	6,109		
Belgium	308	100	...		
Germany (W.)	11	8	38		
Norway	200	150	151		
United States	5,532	5,336	6,348		
Chile	5,699	9,258	7,600		
Turkey	400	...	...
Belg. Congo	250	250	296		
Other countries	273	35	17		
Of which:					
Electrolytic	26,699	24,613	22,145		
Other refined	2,800	2,800	7,500		
Blister or rough	13,599	7,178	9,433		
Wrought and alloys	48	44	99		
Total	43,146	34,635	39,177		

Copper Consumption in United Kingdom

British Bureau of Non-Ferrous Metal Statistics
(In tons of 2,240 pounds)

	Unalloyed	Alloyed*	Total	Virgin	Scrap
1953 Total	243,717	192,337	447,260	322,311	124,949
1954 Total	328,149	251,989	580,138	448,413	131,725
1955 Total	377,576	281,953	659,529	496,467	163,062
1956					
February	33,213	24,163	57,376	40,934	16,442
March	32,903	24,366	57,269	43,913	13,356
April	27,489	21,029	48,518	36,418	12,100
May	29,845	22,295	52,140	41,747	10,393
June	33,774	21,810	55,584	43,622	11,962
July	31,752	19,316	51,086	39,149	11,919
August	24,426	14,434	38,860	30,065	8,795
September	35,203	19,584	54,787	45,807	8,980
October	36,824	21,275	58,099	47,814	10,285
November	38,244	21,142	59,386	47,144	12,242
December	29,927	17,437	47,364	38,505	8,859
Total	388,167	251,312	639,479	500,794	138,685
1957					
January	40,014	21,574	61,588	51,118	10,470
February	36,191	19,849	56,040	43,326	12,714
March	33,537	19,895	53,432	42,787	10,645

*Includes copper sulphate effective October, 1954.

U. K. Zinc Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

—1957—

	Jan.	Feb.	Mar.
(Gross Weight)			
Zinc ore and concentrates	30,193	3,167	7,636
Zinc conc.	17,388	2,958	...
Australia	12,883	2,508	...
Canada	3,546	...	...
Italy	959	...	...
N. Rhodesia	450	...	...
Zinc and zinc alloys	10,017	10,948	13,876
N. Rhodesia	150	200	250
Australia	...	...	1,100
Canada	4,791	4,627	6,048
Belgium	2,712	2,340	1,942
Germany (W.)	151	901	351
Netherlands	85	113	163
Norway	...	...	250
United States	300	300	...
Other countries	1,828	2,467	3,772
Of which:			
Zinc or spelter, unwrought in ingots, blocks, bars, slabs and cakes	10,017	10,948	13,877

Zinc Imports and Exports By Principal Countries

(A. B. M. S.)

Reported in pigs, bars, etc.; metric tons except where otherwise noted.

	IMPORTS	EXPORTS
Dec. 1956	46,452	27,493
Jan. 1957	1	2
Feb. 1957	596	418
Denmark	...	914
France	1,071	532
Germany, W.	5,854	...
Italy	419	...
Netherlands	853	1,045
Sweden	2,060	3,149
Switzerland	2,208	1,632
U. K. (l.t.)	8,175	10,017
India* (l.t.)	2,417	...
	DEC.	JAN.
U. S. (s.t.)	413	496
Canada (s.t.)	16,125	19,304
Denmark	68	39
France	52	56
Germany, W.	3,376	...
Italy	1,393	...
Netherlands	1,483	2,205
Norway	4,529	3,553
Other countries	484	587
U. K.† (l.t.)	318	353
Northern Rhodesia* (l.t.)	2,900	1,971
Australia* (l.t.)	3,569	...

* Includes scrap.
† Includes manufactures.
‡ British Bureau of Non-Ferrous Metal Statistics.

† Not available.

United Kingdom Tin Statistics

(British Bureau of Non-Ferrous Metal Statistics)

	Tin Content of Tin in Ore			Tin Metal		
	Imports	Production*	Stock at end of period*	Imports	Production	Consumption
1955 Total	27,084	1,034	2,181	1,227	27,241	22,390
1956						
January	1,545	110	1,194	14	2,493	1,881
February	2,695	88	2,384	129	1,769	2,082
March	2,526	94	2,705	730	2,452	1,825
April	2,045	76	2,341	155	1,924	1,692
May	1,650	81	1,861	39	2,455	2,301
June	1,647	74	1,240	69	2,060	1,803
July	3,100	111	2,240	173	2,082	1,854
August	2,691	48	2,713	20	1,931	1,577
September	934	83	1,277	247	2,575	1,903
October	3,396	101	2,561	75	2,272	2,223
November	2,034	88	2,308	445	2,293	1,997
December	2,305	91	2,393	131	2,118	1,649
1956 Total	26,571	1,044	2,393	2,226	26,434	22,232
1957						
January	3,584	—	—	25	2,519	2,134
February	—	—	—	—	—	863
March	—	—	—	—	—	2,878

*As reported by International Tin Study Group. Production of Tin Metal includes production from imported scrap and residues refined on ton. Stocks exclude strategic stocks but include official warehouse stocks.

Canada's Copper Output

(Dominion Bureau of Statistics)

	(Refined Copper)			
	(In Tons)			
	1954	1955	1956	1957
Jan.	15,001	22,600	26,653	25,469
Feb.	13,954	21,455	26,229	21,861
Mar.	21,075	25,083	26,750	....
Apr.	20,412	24,077	26,617	....
May	23,012	23,840	27,626	....
June	23,344	21,890	27,122	....
July	21,582	21,185	27,250	....
Aug.	22,000	26,184	29,219	....
Sept.	22,684	24,752	27,950	....
Oct.	21,661	25,546	29,696	....
Nov.	22,981	25,213	27,346	....
Dec.	24,935	27,172	28,716	....
Year	252,643	288,987	331,174	....

Canada's Copper Exports

(Ingots, bars, slabs and billets)

(In Tons)

	1954	1955	1956	1957
Jan.	9,081	11,078	15,981	20,582
Feb.	8,385	12,897	11,041	16,272
Mar.	11,671	12,423	12,276	....
Apr.	11,218	10,321	14,476	....
May	18,407	10,911	12,851	....
June	14,877	13,387	10,985	....
July	15,467	12,674	13,599	....
Aug.	14,158	13,219	14,710	....
Sept.	14,069	13,479	17,268	....
Oct.	11,528	14,208	13,896	....
Nov.	13,372	14,545	19,130	....
Dec.	13,897	14,057	18,630	....
Year	156,130	153,199	174,843	....

Canada's Lead Output

(Dominion Bureau of Statistics)

(Recoverable Lead)*

(In Tons)

	1954	1955	1956	1957
Jan.	17,716	18,959	16,002	14,135
Feb.	16,863	15,018	14,344	15,279
Mar.	17,104	19,113	16,857	....
Apr.	19,452	17,889	11,573	....
May	19,953	16,808	15,446	....
June	18,988	17,800	18,145	....
July	19,164	16,650	15,841	....
Aug.	18,237	16,676	16,104	....
Sept.	17,066	15,972	15,760	....
Oct.	16,569	13,658	16,725	....
Nov.	18,365	15,182	14,865	....
Dec.	19,093	17,857	16,056	....
Year	219,280	201,583	188,971	....

* New base bullion from Canadian ores plus recoverable lead in ores or concentrates shipped for export.

Canada's Lead Exports

(Dominion Bureau of Statistics)

	(In Pigs)			
	(In Tons)			
	1954	1955	1956	1957
Jan.	6,170	5,500	4,888	8,946
Feb.	7,560	11,882	3,856	6,632
Mar.	11,092	10,318	4,007	....
Apr.	9,606	11,967	7,636	....
May	11,483	6,416	7,214	....
June	12,018	9,897	6,632	....
July	13,152	8,341	9,696	....
Aug.	8,646	4,884	4,713	....
Sept.	10,045	5,538	9,908	....
Oct.	8,005	8,053	9,072	....
Nov.	10,817	4,622	9,227	....
Dec.	7,815	5,286	2,734	....
Year	116,406	92,407	79,633	....

Canada's Silver Exports

(Dominion Bureau of Statistics)

	(In ores and concentrates)		
	(Fine Ounces)		
	1955	1956	1957
Jan.	429,704	435,047	1,070,285
Feb.	457,261	196,803	1,039,491
Mar.	411,597	328,857	....
Apr.	493,578	348,838	....
May	445,054	447,710	....
June	592,238	495,742	....
July	285,350	686,209	....
Aug.	644,932	1,080,301	....
Sept.	636,992	481,042	....
Oct.	684,301	731,099	....
Nov.	387,147	669,285	....
Dec.	405,719	1,023,481	....
Year	5,873,873	6,924,414	....

Canada's Zinc Output

(Dominion Bureau of Statistics)

	(Refined Zinc)			
	(In Tons)			
	1954	1955	1956	1957
Jan.	17,155	22,028	21,696	20,340
Feb.	15,199	19,865	20,356	19,808
Mar.	16,550	22,215	22,010	....
Apr.	16,249	21,301	21,339	....
May	16,530	21,599	21,790	....
June	17,017	20,565	20,780	....
July	17,917	21,769	21,691	....
Aug.	18,755	22,029	21,354	....
Sept.	18,023	20,898	20,691	....
Oct.	18,871	22,206	21,412	....
Nov.	19,662	21,398	20,470	....
Dec.	21,922	21,135	22,012	....
Year	213,810	257,008	255,601	....

Canada's Silver Output

(Dominion Bureau of Statistics)

	(In Ounces)		
	1955	1956	1957
Jan.	2,182,386	2,280,575	2,123,157
Feb.	1,960,506	2,094,467	1,983,318
Mar.	2,413,591	2,296,648	....
Apr.	2,304,287	1,759,384	....
May	2,235,620	2,463,374	....
June	2,461,675	2,494,748	....
July	2,385,654	2,267,271	....
Aug.	2,480,607	2,315,312	....
Sept.	2,386,385	2,517,451	....
Oct.	2,371,890	2,379,162	....
Nov.	2,088,991	2,429,547	....
Dec.	2,388,627	2,357,202	....
Year	27,696,319	27,655,141	....

Canada's Zinc Exports

(Dominion Bureau of Statistics)

	(Slabs in Tons)			
	1954	1955	1956	1957
Jan.	16,625	22,181	15,550	19,304
Feb.	11,328	25,556	11,757	16,618
Mar.	18,199	20,178	8,822	....
Apr.	17,926	21,018	14,317	....
May	13,926	14,820	11,357	....
June	15,654	19,581	15,296	....
July	27,582	13,522	15,499	....
Aug.	14,934	16,581	13,070	....
Sept.	17,298	11,793	19,732	....
Oct.	13,064	19,836	20,792	....
Nov.	16,224	14,164	21,411	....
Dec.	23,277	14,607	16,125	....
Year	206,037	213,837	183,728	....

Canada's Nickel Output

(Dominion Bureau of Statistics)

	(In Tons)			
	1954	1955	1956	1957
Jan.	12,765	14,387	14,985	16,609
Feb.	11,874	13,375	14,997	15,027
Mar.	13,619	15,544	15,504	....
Apr.	13,015	15,011	14,431	....
May	13,458	15,352	15,203	....
June	13,269	14,835	14,492	....
July	12,901	14,530	15,125	....
Aug.	13,428	14,825	14,852	....
Sept.	13,521	13,734	14,530	....
Oct.	14,323	14,411	15,762	....
Nov.	14,159	14,290	15,062	....
Dec.	14,947	14,881	14,824	....
Year	164,279	175,173	178,767	....

Canadian Copper Exports

(Dominion Bureau of Statistics)

	(In tons of 2,000 lbs.)		
	Dec. 1956	Jan. 1957	Feb. 1957
Ore, matte,			
regulus, etc.			
(content)	4,666	2,775	2,738
United States ..	3,139	1,401	2,296
Belgium	24	...	...
Germany (W.)	30	...	...
Netherlands	58	...	...
Norway	1,404	1,201	331
U. Kingdom	123	61	111
Ingots, bars,			
billets, anodes ..	18,630	20,582	16,272
United States ..	9,392	8,211	8,142
Brazil	220	364	...
Denmark	1	...	...
France	1,008	698	954
Switzerland	481	...	...
U. Kingdom	8,008	8,888	6,980
Australia	560	...	...
India	1,370	196	...
Other countries	2	9	...
Total Exports:			
Crude & refined ..	23,296	23,357	19,010
Old and scrap	1,150	1,736	940
Rods, strips,			
sheet & tubing	516	1,034	441

Canadian Zinc Exports

(Dominion Bureau of Statistics)

	(In tons of 2,000 lbs.)		
	Dec. 1956	Jan. 1957	Feb. 1957
Ore (zinc content)	17,491	13,883	10,661
United States	17,491	9,307	10,661
France	546	...	...
U. Kingdom	4,030	...	...
Slab zinc	16,125	19,304	16,618
United States	14,025	10,286	12,670
Argentina	91	...	...
U. Kingdom	2,100	9,018	3,613
Korea .....	...	...	99
Other countries .....	...	...	33
Italy .....	...	...	112
Total Exports:			
Ore and slabs	33,616	33,187	27,279
Zinc scrap,			
dross, ashes	387	1,260	483
United States	110	51	95
Belgium	116	...	135
Germany (W.)	86	31	90
Netherlands	75	1,025	130
Japan .....	...	153	33

Canadian Lead Exports

(Dominion Bureau of Statistics)

	(In tons of 2,000 lbs.)		
	Dec. 1956	Jan. 1957	Feb. 1957
Ore (lead content)	4,568	3,194	1,773
United States	4,568	1,798	1,773
Belgium	620	...	...
Germany (W.)	776	...	...
Refined lead	2,733	8,946	6,632
United States	1,316	847	3,778
Brazil	220	111	108
U. Kingdom	65	5,320	2,352
Japan	1,132	2,627	358
Taiwan .....	...	...	36
Other countries	41	...	...
Total Exports:			
Ore and refined	7,301	12,140	8,405
Pipe and tubing	2	...	1
Lead scrap	4	46	...

METALS, MAY, 1957

Copper Imports and Exports By Principal Countries

(A. B. M. S.)

Reported in ingots, slabs, etc.; metric tons except where otherwise noted.

	IMPORTS		
	Dec. 1956	Jan. 1957	Feb. 1957
U. S. (blast, s.t.)	34,794	32,494	18,217
(ore, etc., s.t.)	9,962	12,462	10,131
(ref., s.t.)	15,419	13,496	14,190
Denmark	438	551	422
France (crude)	1	813	1
(refined)	15,878	13,614	15,498
Italy	15,054	...	...
Germany, W.	19,865	...	...
Netherlands	1,026	2,599	...
Norway	334	659	...
Sweden	4,692	3,529	...
Switzerland	3,030	4,812	3,843
U. K. (l.t.)	38,853	43,146	34,635
India (blister/- ref., l.t.)	2,829	...	...
	EXPORTS		
U. S. (ore and unref., s.t.)	736	1,223	1,407
(ref., s.t.)	39,620	29,933	29,769
Canada	18,630	20,582	16,272
Finland	51	2	103
Germany, W.	4,145	...	...
Norway	1,858	1,146	...
Sweden	737	919	...
U. K. (l.t.)	4,442	5,408	3,716
No. Rhodesia (ref. & blast., l.t.)	34,381	28,990	46,031

+ Includes old.

* British Bureau of Non-Ferrous Metal Statistics.

U. K. Copper Imports

(British Bureau of Non-Ferrous Metal Statistics)

	(In tons of 2,240 lbs.)		
	Dec. 1956	Jan. 1957	Feb. 1957
(Gross Weight)			
Copper and copper alloys	38,853	43,146	34,635
U. S. Africa	50	...	...
N. Rhodesia	20,059	24,786	12,048
Canada	6,484	5,487	7,400
Belgium	510	508	100
Germany (W.)	9	11	8
Norway	200	150	...
United States	2,165	5,532	5,336
Chile	9,380	5,699	9,258
Peru	50	...	...
Turkey	400	...	...
Belg. Congo	250	250	250
Other countries	6	273	35
Of which:			
Electrolytic	26,480	26,699	24,613
Other refined	3,600	2,800	2,800
Blister or rough	8,712	13,599	7,178
Wrought and alloys	61	48	44

Canada's Nickel Exports

(Dominion Bureau of Statistics)

	(In Tons)		
	January	1956	1957
January	14,421	15,121	14,260
February	13,915	13,940	9,974
March	13,564	16,219	...
April	16,083	14,448	...
May	14,761	14,729	...
June	16,296	16,493	...
July	13,929	11,079	...
August	14,861	18,470	...
September	14,638	13,849	...
October	13,589	12,800	...
November	13,073	14,084	...
December	14,749	16,694	...
Year	173,879	176,837	...

French Copper Imports

(A. B. M. S.)

	(In metric tons)		
	Jan.	Feb.	Mar.
Crude copper for refining (blister, black and cement)	813	1	...
U. Kingdom .....	...	1	...
Belg. Congo	813	...	...
Refined	13,614	15,498	13,907
United States	3,469	3,912	2,236
Canada	379	708	1,136
Chile	15	2,753	...
Belgium	5,013	3,902	3,955
Germany (W.)	1,021	511	724
Norway	203	203	102
Sweden	102	...	102
U. Kingdom	356	143	701
Belg. Congo	1,611	1,768	3,768
Rhodesia- Nyassaland	1,445	1,598	1,183

French Zinc Imports

(A. B. M. S.)

	(In metric tons)		
	Jan.	Feb.	Mar.
Ore (gross weight)	30,087	21,633	24,916
Canada	1,000	...	...
Peru	1,362	241	3,407
Greece	5,964	1,829	...
Italy .....	...	...	961
Norway .....	...	...	...
Portugal	208	...	...
Spain	3,176	6,236	3,489
Sweden .....	...	1,006	...
Yugoslavia .....	...	2,130	2,050
Algeria	6,932	...	344
Morocco	10,869	6,872	9,009
Tunisia	784	...	...
Belg. Congo .....	...	3,111	...
Australia .....	...	...	1,687
Slabs, bars, blocks, etc.	532	579	1,071
Belgium	431	479	996
Germany (W.) .....	...	100	...
Italy .....	...	...	50
Norway .....	...	...	25
Russia	51	...	...
U. Kingdom	50	...	...

French Metal Exports

(A. B. M. S.)

	(In metric tons)		
	Jan.	Feb.	Mar.
Lead			
Ore (gross weight)	69	5	736
Pig lead	81	20	518
Switzerland	80	20	...
U. Kingdom .....	...	...	515
Other countries	1	...	3
Antimonial lead	34	29	33
Zinc			
Slabs, bars, blocks, etc.	56	2	51

IT PAYS

to

ADVERTISE

in the

DAILY METAL REPORTER

Nonferrous Castings

MONTHLY SHIPMENTS, BY TYPE OF METAL
(Bureau of Census — Thousands of Pounds)

	Alu- minum	Copper	Magnes- ium	Zinc	Lead Die
1951 Total	515,131	1,197,443	30,825	487,996	25,936
1952 Total	518,979	1,009,910	34,857	408,353	20,941
1953 Total	658,022	990,496	34,517	521,253	20,444
1954 Total	607,764	834,557	25,572	474,741	18,396
1955					
October	72,197	91,192	2,302	71,689	1,789
November	75,065	90,345	2,325	75,099	1,896
December	75,275	88,287	2,255	70,950	1,817
Total	833,058	1,011,748	27,892	781,254	21,045
1956					
January	74,152	89,767	2,959	68,050	1,598
February	73,096	91,706	2,977	66,584	1,636
March	73,785	96,085	3,046	65,760	1,644
April	67,880	90,679	3,140	58,274	1,910
May	65,786	89,188	3,021	52,205	1,919
June	58,189	78,921	2,949	47,775	1,883
July	52,955	60,926	2,810	42,227	1,551
August	61,507	77,619	3,059	52,321	2,112
September	62,503	72,109	3,079	46,340	1,004
October	74,209	81,049	3,442	65,450	2,206
November	69,741	72,866	2,892	64,972	1,788
December	67,333	65,198	2,794	58,111	1,483
Total	801,136	966,473	36,168	88,069	20,734
1957					
January	72,999	82,025	3,207	67,964	1,883
February	69,279	72,084	2,661	59,793	1,435

Copper Castings Shipments

BY TYPE OF CASTING
(Bureau of Census) (Thousands of Pounds)

	Total	Sand	Mold	Die	All Other
1951 Total	1,197,443	1,075,437	69,883	12,516	39,607
1952 Total	1,009,910	910,862	63,865	8,259	26,924
1953 Total	990,496	888,369	61,316	10,077	30,734
1954 Total	834,557	751,804	48,849	6,480	27,394
1955					
September	89,600	80,481	5,603	692	2,824
October	91,192	82,958	4,513	727	2,994
November	90,345	80,934	5,807	743	2,861
December	88,287	78,327	6,368	713	2,879
Total	1,011,748	907,852	63,041	8,541	31,408
1956					
January	89,767	80,116	6,135	799	2,717
February	91,706	82,244	5,888	727	2,847
March	96,085	85,894	6,299	782	3,110
April	90,679	81,333	5,835	722	2,789
May	89,188	80,155	5,398	751	2,854
June	78,921	70,260	5,052	755	2,854
July	60,926	55,027	3,193	506	2,200
August	77,619	70,479	3,805	904	2,431
September	72,109	64,887	3,930	929	2,363
October	81,049	73,058	4,104	1,120	2,767
November	72,866	65,022	4,114	1,057	2,673
December	65,198	57,929	3,769	971	2,529
Total	966,113	866,404	57,522	10,023	32,134
1957					
January	82,025	73,702	4,510	1,008	2,805
February	72,084	64,346	4,188	874	2,676

Nickel Averages

**Electro. cathode sheets, 99.00%
f.o.b. refinery, duty included**
(Cents per pound)

	1954	1955	1956	1957
Jan.	60.00	64.50	64.50	74.00
Feb.	60.00	64.50	64.50	74.00
Mar.	60.00	64.50	64.50	74.00
Apr.	60.00	64.50	64.50	74.00
May	60.00	64.50	64.50	...
June	60.00	64.50	64.50	...
July	60.00	64.50	64.50	...
Aug.	60.00	64.50	64.50	...
Sept.	60.00	64.50	64.50	...
Oct.	60.00	64.50	64.50	...
Nov.	60.98	64.50	64.50	...
Dec.	64.50	64.50	72.48	...
Av.	60.46	64.50	65.165	...

Platinum Averages

N. Y. MONTHLY QUOTATIONS
(Dollars per Troy Ounce)

	1954	1955	1956	1957
Jan.	91.40	81.00	106.30	101.92
Feb.	91.00	78.16	104.34	98.59
Mar.	87.88	78.00	104.23	93.50
Apr.	85.50	77.94	103.92	93.45
May	85.50	77.50	105.23	...
June	85.50	78.33	106.50	...
July	85.50	81.78	106.50	...
Aug.	85.00	84.59	105.76	...
Sept.	85.50	91.96	105.50	...
Oct.	83.62	94.60	104.85	...
Nov.	81.07	103.11	104.50	...
Dec.	80.64	106.58	104.50	...
Av.	85.72	86.12	105.18	...
Av.	85.72	86.12	105.18	...
Av.	265.84	292.90	261.71	...

Spot Straits Tin

(Straits, Open Market, N. Y.)

Monthly Average Prices

	1954	1955	1956	1957
Jan.	85.125	87.268	105.036	101.511
Feb.	85.16	90.836	100.803	101.132
Mar.	92.457	91.161	100.786	99.643
Apr.	96.298	91.48	99.268	99.304
May	93.51	91.41	96.994	...
June	94.24	93.68	94.589	...
July	96.55	97.08	96.143	...
Aug.	93.381	96.521	99.049	...
Sept.	93.536	96.607	103.809	...
Oct.	93.225	96.20	106.023	...
Nov.	91.176	97.987	110.921	...
Dec.	88.571	108.02	104.268	...
Aver.	91.935	94.85	101.474	...

Prompt Tin Prices

(Straits, Open Market, N. Y.)

Monthly Average Prices

	1954	1955	1956	1957
Jan.	84.84	87.628	104.768	101.347
Feb.	85.04	90.75	100.586	100.257
Mar.	91.24	91.065	100.524	99.476
Apr.	96.238	91.41	99.145	99.286
May	93.51	91.38	96.853	...
June	94.24	93.64	94.488	...
July	96.55	96.825	96.131	...
Aug.	93.381	96.456	98.924	...
Sept.	93.536	96.256	103.559	...
Oct.	93.00	96.075	105.716	...
Nov.	91.099	97.882	110.329	...
Dec.	88.571	107.75	104.00	...
Av.	91.77	94.73	101.252	...

Quicksilver Averages

N. Y. Monthly Averages

Virgin, Dollars per 76-lb. Flask

	1954	1955	1956	1957
Jan.	189.60	324.68	277.88	256.00
Feb.	190.00	324.68	270.29	256.00
Mar.	201.63	322.61	261.40	256.00
Apr.	221.36	318.14	267.22	256.00
May	251.20	306.62	267.675	...
June	273.46	286.98	260.69	...
July	287.40	268.22	256.06	...
Aug.	290.71	255.18	256.00	...
Sept.	314.08	263.70	256.00	...
Oct.	329.50	279.02	255.92	...
Nov.	321.17	282.50	255.13	...
Dec.	319.96	282.27	256.00	...
Av.	265.84	292.90	261.71	...

METALS, MAY, 1957

Primary Aluminum Output, Shipments and Stocks

(U. S. Department of Interior)

	Stocks beginning of month short tons	Production short tons	—Sold or Used—		Stocks end of month short tons
			Short tons	Value f. o. b. plant	
1956					
June	11,898	145,729	140,225	67,775,239	17,399
July	17,399	151,624	134,089	64,858,158	34,925
August	34,925	92,406	90,614	44,519,556	36,717
September	36,717	132,316	121,854	60,104,570	47,179
October	47,179	149,125	134,014	67,126,363	62,290
November	62,290	145,081	119,787	60,252,640	87,584
December	87,584	148,391	133,186	67,039,743	102,789
Total		1,679,247	1,591,478		....
1957					
January	102,496	147,029	104,394	52,418,766	145,131
February	145,131	119,059	97,886	49,173,176	166,324

Aluminum Wrought Products

PRODUCERS' MONTHLY NET SHIPMENTS

(Bureau of Census — Thousands of Pounds)

	Total	Plate, Sheet, & Strip	Roled Structural Shapes, Rod Bar & Wire	Extruded Shapes Blooms & Tubing	Powder, Flake, & Paste
1954 Total	2,088,439	1,165,090	357,229	518,070	46,255
1955					
August	250,036	141,400	29,413	67,904	3,039
September	244,135	134,240	32,973	67,407	2,926
October	248,806	138,328	30,554	71,456	2,926
November	245,526	137,109	31,656	67,798	2,658
December	242,993	138,592	31,802	64,159	1,837
Total	2,805,500	1,542,368	365,391	812,311	35,854
1956					
January	251,639	142,049	34,008	67,499	2,118
February	240,999	134,077	33,727	65,261	1,901
March	232,767	128,432	30,972	63,482	1,947
April	260,610	143,859	37,971	69,639	3,316
May	264,378	147,613	39,900	68,106	2,215
June	240,415	132,510	33,438	65,600	2,119
July	247,895	139,571	35,346	64,249	2,736
August	248,457	141,400	32,413	66,315	3,039
September	217,425	117,074	32,154	59,462	2,953
October	252,289	136,546	25,385	73,363	2,255
November	218,272	114,618	31,501	64,197	1,716
December	194,822	99,851	31,787	55,225	1,702
Total	2,870,101	1,577,601	398,602	782,398	28,017
1957					
January	234,805	126,008	35,911	64,227	1,970
February	206,397	109,786	30,330	58,296	1,927
March	227,807	118,285	34,365	66,153	2,190

Aluminum Castings Shipments

(Bureau of Census)

BY TYPE OF CASTING

	(Thousands of Pounds)	Permanent			All Other
		Total	Sand Mold	Die	
1951 Total	515,131	193,378	160,011	151,465	10,277
1952 Total	518,979	194,616	146,883	169,732	7,748
1953 Total	658,022	214,553	200,025	239,330	4,114
1954 Total	609,066	155,738	213,968	232,726	6,800
1955					
September	67,170	14,870	23,075	28,532	693
October	72,197	14,485	25,135	31,741	836
November	75,065	14,327	26,267	33,852	619
December	75,275	15,291	25,031	34,347	606
1955 Total	833,058	171,757	298,115	354,804	8,282
1956					
January	74,152	15,861	24,528	33,253	510
February	73,096	15,560	23,963	32,949	624
March	73,785	16,597	22,816	33,965	407
April	67,880	14,732	20,718	31,782	648
May	65,786	15,600	19,669	29,814	703
June	58,189	13,448	19,067	25,027	647
July	52,955	12,398	16,388	23,491	678
August	61,407	13,100	18,067	29,553	687
September	62,503	12,354	17,855	31,640	654
October	74,209	14,389	21,120	37,782	918
November	69,741	14,333	20,673	33,929	806
December	67,333	13,391	20,557	32,923	454
1956 Total	801,036	171,763	245,421	376,108	7,736
1957					
January	72,999	14,201	20,963	37,194	641
February	69,727	13,366	21,707	34,311	343

METALS, MAY, 1957

Virgin Aluminum

Virgin 99% Delivered

Monthly Average Prices

(Cents per pound)

	1954	1955	1956	1957
Jan.	21.50	22.90	24.40	27.10
Feb.	21.50	23.20	24.40	27.10
Mar.	21.50	23.20	24.60	27.10
Apr.	21.50	23.20	25.90	27.10
May	21.50	23.20	25.90	....
June	21.50	23.20	25.90	....
July	21.50	23.20	25.90	....
Aug.	22.12	24.26	26.70	....
Sept.	22.20	24.40	27.10	....
Oct.	22.20	24.40	27.10	....
Nov.	22.20	24.40	27.10	....
Dec.	22.20	24.40	27.10	....
Av.	21.785	23.655	26.008	....

Magnesium Wrought Products Shipments

(Bureau of Census)

	(Thousands of Pounds)			
	1954	1955	1956	1957
Jan.	972	1,776	2,188	1,065
Feb.	1,136	1,648	1,901	1,261
Mar.	1,136	1,947	1,946	1,194
Apr.	892	1,756	2,279	....
May	1,129	1,836	2,462	....
June	1,312	1,686	2,302	....
July	1,032	1,437	2,002	....
Aug.	1,111	1,742	2,523	....
Sept.	1,183	2,159	1,988	....
Oct.	1,002	1,667	861	....
Nov.	1,243	1,954	2,141	....
Dec.	1,673	1,577	2,452	....
Total	13,743	21,186	24,975	....

Cadmium Averages

N. Y. Monthly Averages

	Cents per lb. in ton lots			
	1954	1955	1956	1957
Jan.	200.00	170.00	170.00	170.00
Feb.	170.00	170.00	170.00	170.00
Mar.	170.00	170.00	170.00	170.00
Apr.	170.00	170.00	170.00	170.00
May	170.00	170.00	170.00	170.00
June	170.00	170.00	170.00	170.00
July	170.00	170.00	170.00	170.00
Aug.	170.00	170.00	170.00	170.00
Sept.	170.00	170.00	170.00	170.00
Oct.	170.00	170.00	170.00	170.00
Nov.	170.00	170.00	170.00	170.00
Dec.	170.00	170.00	170.00	170.00
Av.	172.50	170.00	170.00	170.00

Steel Ingot Production

(American Iron and Steel Institute)

Period	Estimated Production — All Companies					Calculated weekly production, all companies (net tons)						
	OPEN HEARTH		BESSEMER		ELECTRIC							
	Net tons	capacity	Per cent	Net tons	capacity	Per cent	Net tons	capacity	Per cent	TOTAL	Per cent	
1952 Total	82,846,439	87.2	3,523,677	65.5	6,797,923	82.6	93,168,059	85.1	1,782,097			
1953 Total	100,473,823	97.9	3,855,705	83.2	7,280,191	71.1	111,609,719	94.9	2,140,578			
1954 Total	89,837,494	78.6	8,448,184	68.3	5,488,064	52.0	88,811,682	71.0	1,699,741			
1955 Total	105,842,386	95.6	3,319,058	64.3	8,338,592	77.2	117,000,566	92.0	2,243,969			
1956												
January	9,876,151	101.4	323,235	79.5	822,845	86.6	10,828,231	99.3	2,444,296			
February	9,048,064	101.3	296,548	78.0	719,388	87.1	10,118,995	99.2	2,444,202			
March	9,795,263	102.7	310,060	76.3	819,465	85.7	10,924,788	100.3	2,466,092			
April	9,437,945	102.2	306,388	77.9	779,452	84.2	10,523,783	99.7	2,455,097			
May	9,370,167	98.2	297,990	73.5	822,219	86.0	10,499,376	96.2	2,365,031			
June	8,665,044	98.9	282,846	71.9	778,444	88.6	9,721,436	92.1	2,268,869			
July	8,386,151	101.9	—	—	792,012	86.5	1,622,163	14.9	387,006			
August	7,213,274	75.6	189,564	46.5	719,759	75.3	8,122,597	74.5	1,833,543			
September	9,342,796	101.2	286,978	72.9	792,886	85.7	10,422,659	98.8	2,435,201			
October	9,841,002	103.2	330,101	81.2	877,410	91.8	11,048,513	101.3	2,573,411			
November	9,430,240	102.2	295,827	72.5	829,925	89.6	10,555,500	100.0	2,460,490			
December	9,695,819	101.6	308,465	75.9	833,161	87.1	10,837,545	99.4	2,451,933			
Total	102,840,583	91.6	3,227,997	67.4	9,147,567	81.2	11,216,149	89.8	2,203,828			
1957												
January	9,829,691	99.0	294,839	77.1	884,232	86.5	11,008,762	97.1	2,485,048			
February	8,898,671	99.2	277,682	80.4	810,853	87.8	9,987,206	97.6	2,496,801			
March	9,442,164	95.1	275,156	71.0	871,754	85.2	10,589,074	93.4	2,390,310			
April	8,821,000	91.8	232,000	62.7	761,000	76.9	9,814,000	89.5	2,288,000			

Blast Furnace Output

(American Iron and Steel Institute)

Period	net tons				(Short Tons) For Own Use
	Pig Iron	Ferro-manganese	& Spiegel	% Total Capacity	
	1950	1951	1952	1953	
Ttl. Yr. 53,507,169	702,561	59,209,730	90.1		
Ttl. Yr. 50,185,941	712,899	60,848,840	90.1		
Ttl. Yr. 53,618,779	592,564	54,106,348	76.8		
Ttl. Yr. 54,810,372	673,886	65,484,168	91.6		
Ttl. Yr. 70,487,380	745,381	71,232,761	98.8		
Ttl. Yr. 61,828,466	629,924	62,188,591	84.2		
Total	74,898,721	855,034	75,842,789	95.5	
Dec.	8,526,780	59,283	6,588,518	80.4	
Total	55,119,882	655,735	58,888,117	71.8	
Jan.	8,729,404	55,249	5,784,855	81.1	
Feb.	8,904,685	48,182	5,443,767	84.8	
Mar.	8,406,902	57,049	6,488,851	90.6	
Apr.	8,320,927	64,712	6,384,859	88.4	
May	8,778,283	61,699	6,804,858	96.4	
June	8,485,855	48,735	6,848,878	96.7	
July	8,329,393	61,168	6,399,859	88.8	
Aug.	8,899,580	71,902	6,601,483	92.5	
Sept.	8,655,978	49,788	6,708,366	97.3	
Oct.	8,906,280	59,993	6,936,275	97.6	
Nov.	8,636,645	62,341	6,698,999	97.7	
Dec.	8,007,607	65,849	6,938,016	92.7	
Total	77,114,978	866,756	77,800,881		
Jan.	8,935,945	62,819	7,049,554	97.1	
Feb.	8,839,199	62,618	6,602,817	92.5	
Mar.	7,932,877	65,566	7,149,448	98.5	
Apr.	8,860,883	62,748	6,924,668	98.6	
May	8,075,192	67,846	6,939,942	95.8	
June	8,387,605	68,981	6,434,859	91.6	
July	8,089,518	71,491	1,107,000	15.2	
Aug.	8,100,449	41,548	6,142,217	70.8	
Sept.	8,875,064	59,584	6,932,648	98.7	
Oct.	7,245,630	69,909	7,315,559	100.8	
Nov.	6,977,457	58,614	7,036,091	100.1	
Dec.	7,268,743	65,841	7,334,584	101.0	
Total	75,301,134	664,341	75,965,475	88.9	
1957	7,209,547	72,826	7,282,373	98.8	
Jan.	6,596,133	61,973	6,658,106	100.0	
Feb.	7,179,100	67,779	7,246,879	98.3	

GALVANIZED SHEET SHIPMENTS

(American Iron & Steel Institute)

(Net Tons)	SHIPMENTS OF TIN-TERNE PLATE				
	(American Iron & Steel Institute)				
1954	1955	1956	1957		
Jan.	169,086	211,101	269,464	235,902	
Feb.	167,433	199,408	272,997	265,048	
Mar.	180,198	238,649	291,193	206,836	
Apr.	203,312	239,001	266,728	—	
May	201,671	235,962	272,741	—	
June	200,456	246,940	279,058	—	
July	214,349	205,211	—	—	
Aug.	207,113	241,863	276,048	—	
Sept.	209,765	269,020	256,803	—	
Oct.	209,498	260,010	278,637	—	
Nov.	195,190	255,692	255,135	—	
Dec.	205,561	261,640	239,173	—	
Total	2,362,632	2,864,497	2,957,991	—	

* Combined with August figures.

Steel Ingot Operations

(Percentage of Capacity as Reported by American Iron & Steel Institute)

Week	Beginning	1954	1955	1956	1957
Jan.	7...	75.4	81.2	97.6	98.4
Jan.	14...	74.3	83.2	98.6	96.4
Jan.	21...	74.1	83.2	99.0	96.6
Jan.	28...	75.6	85.0	100.4	97.6
Feb.	4...	74.4	85.4	99.3	97.1
Feb.	11...	74.4	86.8	99.1	97.7
Feb.	18...	74.6	89.1	98.8	97.8
Feb.	25...	73.6	90.8	98.8	96.0
Mar.	4...	70.7	91.9	99.9	94.2
Mar.	11...	69.3	92.9	100.0	93.8
Mar.	18...	67.6	94.2	100.6	93.5
Mar.	25...	68.1	93.7	99.5	92.4
Apr.	1...	69.1	94.4	99.6	90.6
Apr.	8...	68.0	95.3	97.7	90.3
Apr.	15...	68.0	94.6	100.9	90.4
Apr.	22...	68.6	94.6	100.2	88.7
Apr.	29...	68.7	95.6	100.5	87.0
May	6...	69.4	96.6	96.4	87.5
May	13...	70.9	97.2	95.2	—
May	20...	71.8	96.9	95.3	—
May	27...	71.2	96.4	97.3	—
June	3...	70.2	95.8	96.3	—
June	10...	73.2	94.7	96.7	—
June	17...	72.3	96.0	93.4	—
June	24...	72.1	95.0	93.0	—
July	1...	65.8	71.1	84.9	—
July	8...	60.0	85.9	12.3	—
July	15...	64.3	91.2	12.9	—
July	22...	65.3	91.0	14.6	—
July	29...	64.2	90.7	17.0	—
Aug.	5...	64.0	86.9	16.9	—
Aug.	12...	64.0	89.4	57.5	—
Aug.	19...	61.8	90.2	87.5	—
Aug.	26...	63.5	90.6	95.8	—
Sept.	2...	64.0	93.4	97.0	—
Sept.	9...	63.0	93.8	98.7	—
Sept.	16...	66.3	95.7	100.6	—
Sept.	23...	68.7	96.1	100.6	—
Sept.	30...	70.4	97.0	101.6	—
Oct.	7...	71.0	96.7	101.8	—
Oct.	14...	72.8	96.5	100.9	—
Oct.	21...	73.6	98.9	101.4	—
Oct.	28...	74.5	100.0	101.2	—
Nov.	4...	76.4	99.4	101.3	—
Nov.	11...	77.2	99.6	100.6	—
Nov.	18...	79.3	99.2	100.2	—
Nov.	25...	80.3	100.1	100.1	—
Dec.	2...	81.4	97.6	101.1	—
Dec.	9...	82.5	100.1	101.3	—
Dec.	16...	81.5	100.3	102.0	—
Dec.	23...	72.4	96.9	94.3	—
Dec.	30...	77.6	95.7	97.3	—

METALS, MAY, 1957

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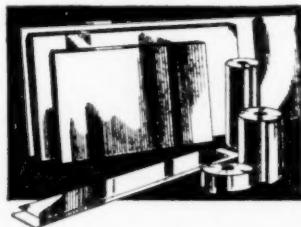
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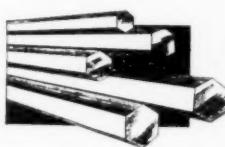
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